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BOSTON SURGICAL SOCIETY

THE AWARD OF THE BIGELOW MEDAL

THE meeting at The John Hancock Hall February 1, 1932 was called to order by Dr. Stephen Rushmore*, who spoke as follows:

On behalf of the Boston Surgical Society, I welcome you to the exercises of this evening. The occasion of the presentation of the Henry Jacob Bigelow medal for distinction of attainment in the science and art of surgery is one that deservedly attracts attention among persons interested in medicine in this community. The privilege of bestowing this medal from time to time was made possible and was conferred upon the Boston Surgical Society by William Sturgis Bigelow, himself a physician and the son of the distinguished surgeon whose name the memorial bears. It is not necessary to dwell on the achievements of Henry J. Bigelow in speaking to this audience. In his own day he was well known far beyond the boundaries of this Commonwealth, and now, over the civilized world, his name is familiar to students of surgery, because of the signal contributions which he made to the science and art to which he devoted his life.

The list of those who have already received the medal is a roll of Honor: William J. Mayo, William W. Keen, Rudolph Matas, Chevalier Jackson, George Grey Turner.

It was but a few months ago that we had as our guest of honor, on an occasion similar to this for which we have gathered this evening, a distinguished member of our profession from across the sea, who, because of that evening will always be regarded by us in most friendly fashion, although he came to some of us almost as a stranger.

The man who is now our guest of honor renews his association with the profession of Boston tonight. He spent but a few years here in the time of his early study of medicine and of his early apprenticeship in surgery, but by the strength and charm of his personality as well as by his surgical achievements, he has made such a significant place for himself that it seems as though he belonged here. I know of at least one effort, vain as it proved to be, that was made to persuade him to identify himself more definitely with us again. To most of us he is no stranger, and when he shall have spoken, you will have a clearer intimation of why we delight to honor him.

It would be a great pleasure to me, who had the good fortune to receive my introduction to surgery under his tuition, and I may say fortunate indeed are they who have had such an introduction, it would be a great pleasure to me to tell you at length of some of his accomplishments, and I would add to the tale of what he has done, some story of what the man himself is, but I must put a curb upon my tongue, for that happy office has fallen to the lot of another, to the President of our Society, Dr. Fred Bates Lund, who will speak for us all, and will present to our guest the Henry Jacob Bigelow medal. Dr. Lund.

*Rushmore — Vice-President, Boston Surgical Society. For record and address of author see "This Week's Issue," page 300.

INTRODUCTORY ADDRESS AT PRESENTATION OF BIGELOW MEDAL TO DR. JOHN M. T. FINNEY

BY FRED B. LUND, M.D.*

DR. FINNEY, the surgical profession of your country delights to honor you, and for this there are many reasons. First, your surgical soundness and skill, secondly, your kindly disposition, and thirdly your character, which stands for so much in your profession that they had to choose you as the first president of the American College of Surgeons. You have been an ornament to the Johns Hopkins Medical School, a real contributor to surgical thought along the widest and most helpful lines, a practitioner whose success has been but a natural reflection of your skill and judgment.

Boston surgery is proud that it has a real interest in your surgical career, for it was at our school that you received your degree in Medicine, and at the Massachusetts General Hospital that you had your first surgical training. Your loyalty to and appreciation of some of the old masters in surgery who were your teachers in that day has been one of the finest of the many fine things about you. Loyalty to our teachers, so strongly emphasized by Hippocrates 2500 years ago, has always in a high degree characterized the real leaders of our profession. We remember also your contribution to Harvard athletics as a member of the football team, which in that day was possible for a medical student. You had previously served on the football team of Princeton, your Alma Mater, that college for which, in spite of the unfortunate bickerings of recent years, Harvard University cannot help feeling real respect, and love and pride. Such sentiments one cannot but feel toward a college that has produced such alumni as you.

Going at once to Baltimore after leaving Boston, you became a member of the most progressive faculty of young men in medicine that this country has seen, and took your part with Halsted, Osler, Welch, Councilman, Cushing and others, in that enthusiastic band of investigators, teachers and practitioners, which was for a time the fine flower of American Medicine. In the practice of your art you made for yourself a place unique in the community, and became the consultant whose opinion was most sought after, and the operator to whom the most important and difficult surgery was intrusted. You devoted yourself especially to the surgery of the alimentary canal and made many contributions to that department of your art. We can never forget when you published your operation for pyloroplasty, so simple, so safe and so efficient, how others of us who were working on the same lines wondered why we were not bright enough to have thought of that ourselves. The care and precision of your suturing, your judgment in the choice of case and procedure, and your undeviating thought of the best interest of your patients, are among the qualities that have contributed to your success. As a consultant in difficult cases your opinion has been sought far and wide. Your steady adherence to the principle, the patient first in all things, has both increased your consulting practice and enlarged its value to your consultants.

It would take a long speech to enumerate your titles,—Professor of Clinical Surgery, Visiting Surgeon to Johns Hopkins Hospital and other hospitals in Baltimore, former president of the American Surgical Association, the Society of Clinical Surgery, the Southern Surgical Association, first president of the American College of Surgeons, etc.

Education has always been one of your leading interests, and this is evidenced by your presidency of the board of trustees of several educational institutions, including the Gilman School for Boys, the Trusteeship of Princeton, and your membership on the Maryland Board of Education.

Early in your career, your surgical skill and judgment were so well appreciated that you were offered the Professorship of Surgery in the University of Texas. An evidence of what the lay public thought of the qualities of your mind and heart and character was shown in the remarkable trust placed in you by the trustees of Princeton College, your Alma Mater, in offering you the presidency of that institution, on the resignation of Woodrow Wilson. What the leaders in your profession in this community thought is shown by the offer of the Professorship of Surgery in Harvard University. It was like you, however, to refuse them both and continue your life of unsurpassed usefulness in the community where your life had been spent.

And now to come to the years that tried men's souls, the years of one of the greatest wars in history. Your record, speaking for itself, requires no embellishment of words from me: Major, Medical Corps, Director of Base Hospital No. 18, Basoilles-Sur-Meuse, France; Colonel, Medical Corps, Chief Consultant in Surgery, American Expeditionary Forces, Brigadier General, Chief Consultant in Surgery, A. E. F.,—Chief Consultant, chosen from the ranks of the flower of our profession, who left their work and home at their country's call. What title

*Lund—President, Boston Surgical Society. For record and address of author see "This Week's Issue," page 300.

could justly confer greater pride upon its holder? And in addition you were Brigadier General, U. S. A., the only one of the medical volunteers to attain that rank. But in your case your rank and honors were borne with modesty and simplicity which have ever been characteristic of you.

Will it be a source of pride to the Boston Surgical Society to have its medal placed beside the Distinguished Service Medal of the United States, the Commandeur de l'Ordre de la Couronne of Belgium, the Officier de la Legion d'Honneur of France? Needless to say that it will. Dr. Finney, my heart is full of gratitude that I as president of this Society have the honor of presenting, to you, this medal. It means so much to us all to present it to one so worthy as you. You have for so many years carried our standard, a living example of our best ideals, our adviser in difficulty, the boon companion (and there is none that ranks above you in this) of our joyous celebrations. We have you here *totus, teres atque rotundus*, modest as usual, finer than ever. You are the living embodiment of what the Bigelow Medal stands for. I firmly believe that the Bigelow Medal never has been and never will be presented to a more worthy recipient. And what is left now but to give it to you with all our heart, and hope that your years may be long in the land for which you have done so much.

CHANGING CONDITIONS IN SURGERY SINCE THE TIME OF HENRY JACOB BIGELOW*

BY J. M. T. FINNEY, M.D.†

MAY I be permitted, first, to express my sincere thanks for this additional honor that has come to me at the hands of my friends, this time, from the Boston Surgical Society, some of whose members I see before me were, in years gone by, my schoolmates or classmates, in the Harvard Medical School, or were fellow House Pupils in the Massachusetts General Hospital. From no source could honor come to me that would be more acceptable or more highly prized. To have anything that I may have accomplished in an active surgical career of almost forty-five years thought worthy by you, my friends and former associates, to entitle me to be the recipient of the Bigelow Medal is in itself sufficient to have made more than worth while whatever effort it may have cost. But when I scan the roll of names of the distinguished company of surgeons who have preceded me in the proud position in which I now find myself, my cup of honors is indeed running over. From the bottom of my heart I thank you.

A review of the Addresses delivered by my predecessors, together with a rather cursory survey of recent medical literature dealing with historical and biographical subjects of the period that just now interests us, namely, the last two decades of the last century and the first two of this, especially monographs and addresses by Mumford, Cheever, Shattuck, Gay, Welch, the President of this Society (Lund), Cushing, Primrose, and many others, make it evident that already the ground has been so well covered that anything that I might say along these lines must, of necessity, be largely a repetition of what has already been better said. What I shall have to say, therefore, will follow a more personal and reminiscent vein, while at the same time, attempting to point out some of the principal changes that have taken place in surgical thought and practice since the time of Henry Jacob Bigelow. I am, I fear, approaching, if indeed, I have not already reached, the garrulous period of life, when reminiscences of "the good old times" are not only pardonable, but are rather to be expected. You will bear with me then, I trust, while I endeavor to paint as graphic and faithful a picture as possible of conditions as I saw them as a student in the Harvard Medical School forty-five years ago, and more especially, in the Massachusetts General Hospital, where it was my privilege to serve as surgical house pupil during the greater part of the years '88 and '89, or until I resigned before completing my term of service to join the Surgical Staff of the Johns Hopkins, when that Hospital was opened. My purpose will be to contrast methods as they then existed in the two Institutions.

Returning again to Boston, on your invitation, as I do after all these years, to the city where, in your great Harvard Medical School and your world-renowned Massachusetts General Hospital, were spent five of the pleasantest and most profitable years of my life, I am very conscious of mixed emotions. As I look about me, on all sides are to be seen evidences of change and progress. In 1884, when I entered the Medical School, while some lectures and demonstrations were still being held in the Old North Grove Street Building, the School had just moved into what were then considered very fine and spacious quarters on Boylston Street. The palatial pile of buildings, which now house the Harvard Medical School, were as yet an unborn dream. The curriculum of the School has been greatly expanded in response to the requirements of the

*The Address delivered before the Boston Surgical Society, Boston, Mass., February 1, 1932, on the occasion of the award of the Henry Jacob Bigelow Medal.

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fundamental sciences and increasing demands of the modern development along special lines. In the grounds of the Massachusetts General Hospital, new wards and buildings have sprung up, and old ones have been modernized and enlarged or torn down. New names of those in positions of leadership are to be heard on the lips of the students who now walk the wards and throng the laboratories. Strange faces are seen where, years ago, one was wont to find familiar faces of teachers whom one was privileged to call friends as well, and at whose feet one was proud to sit and learn wisdom. All are gone, not one remains. Even of the then younger group of surgeons, Harrington, Mixter, Elliot and Newell, all have passed on.

Because of what they have meant to me in times past, it gives me great satisfaction, tinged as it is with sadness to take this opportunity to pay my too inadequate tribute to the extraordinary group of men who at that time composed the Faculty of the Harvard Medical School and the Surgical Staff of the Massachusetts General Hospital. To them I owe a great debt of gratitude for early guidance along paths that lead to a better appreciation of relative values, and to the development of an adequate philosophy of life. I have them to thank for the inculcation in me, both by precept and example, of a sincere desire to cultivate the homely virtues of humility, loyalty, honesty of purpose, and love of the truth; add to these careful observation, scientific reasoning and practical common sense, fundamentals essential to success in any career in life. No wonder, then, that each time one returns to these old familiar scenes, and yet, alas, becoming all the while less familiar, owing to the absence of some old friend to greet one as heretofore, there comes the feeling of deep personal loss. But why mourn for these honored dead? Rather should we not rejoice that we were privileged, in the formative period of our lives, to come under their influence, to have been associated with them in any way? They have lived their lives, busy and fruitful ones they were. They have served faithfully and well their day and generation. They have laid deep and broad the foundations upon which those who come after them may build lofty superstructures. They have left the imprint of their strong personalities upon the habits of thought and lives of their students and successors, an influence that will continue to manifest itself through succeeding generations. Though dead, they yet speak.

What a fortunate and interesting time was the period just referred to in which to begin one's medical studies! The limitless possibilities of the new antiseptic method of Lister were not yet fully appreciated or understood, but enough was known to stimulate keen interest in its further development. The older methods of surgery, many of them harking back to the pre-anesthetic era, were yet generally in use. There were surgeons still living who had begun their active practice before that fateful sixteenth day of October, 1846, when a vascular tumor was removed from the neck of Gilbert Abbott by Dr. Warren in the old rotunda of the Massachusetts General Hospital, after he had been rendered unconscious to pain by ether administered by Dr. Morton. Of those surgeons who had witnessed this dramatic event, there remained one who, although he had retired from the active work of teaching and practice, it was our privilege as medical students in the Harvard Medical School, upon occasion to see and hear. As a young, eager surgeon, enthused by what he had seen, he at once became an ardent advocate of the use of ether in surgery and, largely through his efforts, the knowledge concerning it was disseminated throughout this country and heralded abroad. The surgeon of whom we are speaking, of course, was none other than Henry Jacob Bigelow, to honor whose name and to perpetuate whose fame we are gathered here tonight.

Dr. Bigelow's surgical lifetime spanned the two most momentous epochs in the history of surgery, the introduction of anesthesia and antisepsis. In the period when he was beginning his career, owing to the exigencies of the case, the essence of good surgery lay in a combination consisting of a thorough knowledge of gross anatomy, courage, speed and manual dexterity, such as would put to shame the boasted speed artists of today. For example, it is recorded that upon one occasion Cheselden, a well-known English surgeon celebrated for the qualities just named, performed the complete operation for stone in the bladder in fifty-four seconds. He and Dr. Bigelow, from all accounts, would appear to have had much in common. Cheselden was reported to have been extraordinarily skilful and bold as an operator, and an excellent diagnostician as well. All of his biographers unite in ascribing to Dr. Bigelow these same qualities in an unusual degree. At the same time, one of his most pronounced characteristics, amounting almost to an obsession, was his aversion to causing his patients unnecessary pain. His immediate enthusiastic acceptance of ether anesthesia showed him to have been possessed of discriminating judgment; while his studies in the anatomy of the hip joint, and their application to dislocations and their reduction and his development of litholapaxy in the treatment of stone in the bladder, testify to his originality of thought and inventive genius. Furthermore the unique position that he occupied in the surgical world, not alone in Boston but elsewhere, stamped him as a leader of men. But nothwithstanding the extraordinary qualities, to which reference has just been made,

curiously enough he failed to grasp fully the significance of the changing conditions in the world of medical education. At first, he vigorously opposed reorganization of the curriculum of the Harvard Medical School as proposed by the progressive element in the Faculty with the backing of President Eliot, and he gave rather tardy, half-hearted approval to the antiseptic methods of Lister. To his credit be it said, however, that before his death, he recognized fully and admitted freely the advantages of both innovations. All authors in writing about him agree that Dr. Bigelow was a striking personality, well dressed, distinguished looking, magnetic. As an operator, he typified the old school, in fact, was a strikingly brilliant example of it, and one of the last of his kind. Says Mumford, "He always knew what he intended to do and accomplished it with neatness and dispatch. He was precise, confident and deliberate." Says Cheever, "To see him operate was to recognize a master." Says Arthur Cabot, "He was a brilliant operator, bold and keen, full of expedient, going directly to the object sought, with no fumbling of mind or hand." It was my good fortune to have heard Dr. Bigelow lecture on the two subjects with which his name is inseparably connected, namely, dislocation of the hip and litholapaxy, upon which occasion he described at length the various steps in the development of his work along these lines. I can recall with pleasure even yet the effect upon us students of his remarkable personality. But even more than his striking presence perhaps, was the extraordinary facility with which he used his hands in the manipulation of the hip joint and the lithotrite. Among the pleasantest memories of my medical school days there stand out prominently the demonstrations by Dr. Bigelow, and a lecture or two in anatomy with which we were favored by the genial autocrat, Dr. Oliver Wendell Holmes.

I have dwelt thus at some length upon the characteristics and personality of Dr. Bigelow, not alone because it is to honor his name that is the occasion of our gathering here tonight, but because in his person, Dr. Bigelow typified the best that was in the surgery of his day. He has, by his labors, won for himself imperishable fame, and has added lustre to American surgery.

An anonymous writer in the *London Medical Times and Gazette* in 1856 quotes thus from a poem written by a youth, himself a grateful patient, and dedicated to Cheselden, who had operated on him for stone in the bladder. These lines would seem to apply with almost equal force to Dr. Bigelow.

"The work was in a moment done,
In fact, almost without a groan,
So swift thy hand I could not feel
The progress of the cutting steel.

Aeneas could not less endure,
Though Venus did attend the cure.
For her soft touch nor hand divine
Performed more tenderly than thine:
For quicker ere than sense or thought,
The latent ill to view was brought
And I beheld with ravished eyes,
The cause of all my agonies."

He ends his tribute thus,—

"And above all the race of men
I'll bless my God for Cheselden."

The same anonymous writer gives a pen picture of the old school surgeon, so graphic and intriguing that I quote it also, although I fear it does scant justice to that extraordinarily fine type of man now extinct, the preanesthetic surgeon. "The mental attributes of the standard surgeon have been limited, but marked, in kind. Of those higher qualifications of mind, out of which many of the great truths of the universe have, in the fullness of time, been revealed, these men have presented no trace. They have rather tried to shoot down deep philosophy. They have had their own sphere, and no men have kept more closely to their spheres. Their fame has been founded on two or three traits of mind, at most; first, and far ahead of all other traits is courage, courage in its every phase, the reckless, the cool, the breathless, the refined, the bulldog. Secondly, a fine mechanical hand, a quick, perfect, experienced mind. Thirdly, a talent for details in which the whole man is absorbed. The roll of a bandage, the curve of a knife, the character of a thread, the eye of a needle; to these and their similars, whole volumes and half-lives have been devoted. It is on these qualities of mind in their clearest isolation from contemplation of the supreme law of nature that the great operator of the past has based his reputation. We have excellent operators still, but operative work falters. . . . The glory of the knife has departed. One regret attaches to this principle and action. We lose in the change a race of men of marked type, men of true character, men who worked in a sphere which they knew right well, because they worked in none other; who did what they did like men, whether to do were to kill or cure; who kept the public staring in admiration at a profession that could produce such types of masculinity; who fathered anatomy; who invented many useful devices in their own art; who, by their high sense of honor, integrity, devotion to their studies and pursuits, and by their universal appeal to the eye, and, through it, direct to the mind, formed a close alliance with the world."

At the period referred to, the field covered by surgery as compared to that of today, was very limited. The range of instruction was correspondingly limited. It was given almost exclusively in the form of didactic lectures. The

student was left hardly at all to his own resources. To be sure, there were recitations upon assigned subjects covered by the lectures and textbooks. There was little laboratory work. That most important phase of medical education was a later development. Systematic clinical instruction, ward rounds, the personal contact of patient and student, and teacher and student were little in evidence, although a few of the more up-to-date instructors were making a brave effort to introduce them. The paramount importance of anatomy in surgery, and of the use of drugs in medicine, were still stressed. The pathological era was just beginning to dawn, and bacteriology was still in its infancy. The intimate and vital relationship between physiology and surgery was not yet understood.

The Department of Anatomy was at that time under the able direction of Dr. Dwight. He had succeeded Dr. Holmes, who had recently retired, much to the regret of the students. While an excellent lecturer, Dr. Dwight was apt to show impatience at times with the inattention of the students and their apparent lack of interest in and appreciation of his efforts to make interesting so dry a subject as anatomy. Upon one occasion, when he was lecturing upon the omentum, and demonstrating its attachments, relations, etc., a dense cloud, accompanied by a heavy shower passed over, causing a sudden, rather ominous darkness. Dr. Dwight was so intent upon what he was doing that he did not notice what was going on. Happening to look up in the midst of it, he saw the faces of the students upturned, gazing at the skylight instead of the demonstration. Without a word he dropped his scalpel and forceps, turned on his heel and strode out of the amphitheatre, and had disappeared before any but one or two in the class knew what had happened. We sat there for some minutes bewildered, expecting him to return and finish, as the lecture was not yet nearly concluded. But that was the end for that day. He got back at us, however, later, as one of the questions on the final examination paper that year was "Describe the Omentum and its Attachments." Dr. Dwight will perhaps be remembered best in connection with his method of teaching regional anatomy by means of frozen sections.

Physiology, its vital importance as a fundamental science in the general study of medicine just beginning to be recognized, was ably taught by Dr. H. P. Bowditch. This was one of the outstanding courses in the School, so far as it went, but of course, it was limited largely to lectures and demonstrations.

Who could ever forget the breezy manner or the wealth of anecdote with which Dr. W. L. Richardson embellished his lectures on obstetries, and was thus able to make so drab a subject as that really interesting?

Dr. Fitz's lectures in pathology were most instructive. Who of his students can ever forget the pleasure and profit that one derived from Dr. Fitz's quizzes and demonstrations, or his merciless drilling in recitations, and his uncanny ability to find out and ring the changes upon what one did not know. During this period, that is in 1886, appeared Dr. Fitz's epoch-making paper on appendicitis. It is the proud boast of the present Speaker that shortly after the appearance of this paper, Dr. Fitz was called in consultation to see him in an acute abdominal attack, made the diagnosis of appendicitis, and advised that he should be watched by a surgeon, to use Dr. Fitz's own words, "knife in hand". Upon hearing which pronouncement, the Speaker, not relishing the idea, promptly proceeded to get well. He still retains his appendix, although minus his gall-bladder.

Dr. Ernst attracted and held the attention of the students in his lectures on the new science of bacteriology, the importance of which, owing to the classical work of Koch on the Tubercle Bacillus and in Asiatic Cholera, recently reported, was just beginning to be appreciated.

In passing, I cannot forbear making mention of two or three members of the Medical Side, of whom one instinctively thinks whenever the Harvard Medical School of that period is mentioned. For instance, the delightful lectures on the theory and practice of medicine by "Bunny Minot",—he with the curious tic of the upper lip and nose, so like that of a white rabbit, and from which resemblance his nickname was derived; or the intensely interesting and stimulating lectures and demonstrations in the comparatively new science of embryology by that excellent teacher of the same name, Dr. C. S. Minot, or the lectures and recitations of that extraordinarily able clinician and charming gentleman, Dr. F. C. Shattuck.

Among the potent influences exerted upon the Harvard medical student of that period, and none the less potent because so quiet as hardly to be recognized at the time, was that of the then Professor of Surgery, Dr. Cheever. No earnest student could attend his lectures, operative clinics and ward rounds in the Boston City Hospital without being deeply impressed by his preëminent mastery of his subject. His lectures, delivered in an easy conversational manner, were models of clarity of diction and epigrammatic style, terse, clear, impressive, and always interesting. He was "facile princeps", the best lecturer in the Medical School. As a didactic lecturer, I have never heard his superior, if indeed his equal. For comparison, my memory runs back to the early days of the Hopkins, to the lecture courses of Drs. Welch and Howell, both past masters in the now lost art of didactic medical

lecturing. Naturally of a reserved disposition, quiet and dignified in manner, of the ascetic type, the first impression made upon the student by Dr. Cheever was that of coldness and austerity. But it did not take long to find out that behind this apparent mask there was a very kind heart and a keen sense of humor. There was a rumor current among the students that the appearance and manner of Dr. Cheever just described were to be attributed to the fact that he was a chronic dyspeptic. No little sympathy was aroused among the students on this score, because they all admired him greatly. Imagine my surprise then, when a few years later it was my privilege to entertain Dr. Cheever on the occasion of a visit to Baltimore. On his arrival late one evening, I met him at the train and took him to the Club for some refreshment before retiring. When I asked him what he would like to eat, I expected that at that hour a glass of milk or, at most, a poached egg would be all that would tempt him, a supposedly confirmed dyspeptic. But, no indeed! After examining the menu card, with his usual deliberation he remarked, "I believe that Baltimore is the home of the terrapin, is it not?" Upon my assurance that it was, he replied "I think I should like to try some." So, to my surprise, and to his evident satisfaction, he sat up and did full justice to a chafing-dish of terrapin a la Maryland, as it can be prepared only in the Maryland Club, and as a result, the next day he appeared in better form than usual.

Although his forte was lecturing and teaching, he was also an excellent operator, exhibiting traits more characteristic of the surgery of today than of that period. One could not watch the careful attention to detail, the quiet assurance, the gentle handling of tissues that always characterized his work, and the boldness and skill manifested in handling emergencies as they arose without recognizing the master-surgeon. Although not a large contributor to surgical literature, Dr. Cheever's writings upon varied topics and his perfection of certain operative procedures, more especially upon the face and neck; his early adoption of the principle of abdominal operations even before the advent of antisepsis (he is reported to have performed the first successful ovariotomy, as well as the first Caesarian Section, that was done in Boston), all show originality and initiative, and demonstrate conclusively that he had foresight and the courage of his conviction. One of Dr. Cheever's outstanding contributions to medical education was the firm stand that he took in the reorganization of the Harvard Medical School. In this, he took sharp issue with Dr. Bigelow, and gave wholehearted support to President Eliot's contention in favor of a graded course of instruction. He left his impress upon thirty-three classes of Harvard medical students.

And so I could run through the whole list of Medical School instructors, many of them teachers well above the average; a few, in their special departments and in their ability to apprehend and interpret the signs of the times, were stars of the first magnitude. Generally speaking, however, while the methods of instruction in use in the Harvard Medical School compared very favorably with those of other schools, still, as compared with the instruction given today in the same school and in other Class A medical schools, they seem rather crude and haphazard.

One cannot think of the Harvard Medical School as it existed on Boylston Street without recalling, at the same time, that most interesting personality, Jim Skillen, the Irish janitor of the School, a past master of the wit and humor for which his race is noted. I wish I could repeat here some of his sayings, or his characterizations of various members of the Faculty and student-body, but I fear they would fail to pass the censor, for, although witty in the extreme, and full of humor, his comments not infrequently, to say the least, savored somewhat of vulgarity.

After three years spent in the Harvard Medical School, which in my case lengthened out to four years, owing to a severe attack of typhoid fever, for which I spent three months as a patient in the Massachusetts General Hospital, the time arrived, the most exciting in the life of a medical student, when he must decide the momentous question as to where to take his hospital internship. In those days, appointments to the Massachusetts General Hospital and Boston City Hospital were the most sought after, and for both of them it was customary as, I believe, it still is, to hold examinations. I took the examination for the Massachusetts General Hospital, not expecting anything. With what surprise and incredulity, then, did I receive the news that my name was on the list of appointees. I hurried at once to my room in the house then occupied by Drs. Tarbell and Gannett, to tell them the good news. Dr. Tarbell, after offering his congratulations, inquired on which side I was to serve. When I told him on the West side, he replied "Fine, you will have an excellent combination to work under; from Dr. Porter you will learn how to operate, from Dr. Cabot you will learn how to take care of patients after they have been operated upon, and from Dr. Homans you will learn what not to do, and I fancy you will learn more of practical value from him than from either of the other two." I later came to learn, from close association with these three men, that Dr. Tarbell had spoken even more truthfully than he probably knew.

This is neither the time nor the place to recount the interesting and busy life of a house officer in the Massachusetts General Hospital in the 80's. I fancy that it did not differ greatly from that of today except in detail; the same rush to get one's work done; the same endless routine; the same keen interest in examining and diagnosing correctly the ailments of the new cases as they were admitted to one's wards; the same pride in complete and accurate histories and neat surgical dressings; the same formal ward rounds or "coat-tail visits" as occasion required; the same late hours and the same midnight suppers furnished by friendly, sympathetic night nurses against orders, and all the more relished because clandestinely obtained; the same devotion to one's chiefs and the same delightful friendships formed with one's fellow residents that will last as long as life. No! Surgical methods and technique have changed greatly in the intervening years, but human nature under a thin veneer of changing customs and passing fancies has changed little, if indeed at all.

The most vivid impression, perhaps, upon the mind of the first year medical student or the newly appointed interne was that made by the very formal Saturday morning operating clinics at the Massachusetts General Hospital. The operative ritual, as I recollect it, was as follows: the members of the Visiting Staff and any celebrities that happened to be present occupied the front row of chairs on the operating floor of the surgical amphitheatre. After the patient had been etherized and wheeled in, and a brief résumé of his history given, the operating surgeon very politely would ask each of the visitors in turn to step up and examine the patient. This invitation was not infrequently accepted. After the patient had been inspected and palpated by the visitors, the operative field was cleaned up in the most perfunctory manner with soap and water and a dash of bichloride of mercury 1-1000. A few towels wrung out of the same solution were draped around the field of operation, and all was in readiness to begin. The operating surgeon was usually garbed in a black Prince Albert coat, kept hanging in a closet for the occasion and showing numerous evidences of previous operations in the way of dried blood, wound secretions, etc. The assistants were just beginning to affect white coats; whole suits were a later innovation. Preparation of the hands for the operation was done in careless fashion, especially by the older surgeons. The members of the House Staff, in their youthful enthusiasm, were, as a rule, quite conscientious and fairly thorough. Under a wooden table which stood in the amphitheatre, there were kept seven large glass jars, marked with the days of the week, and containing ordinary sea-sponges soaking in a solution of 1-40 carbolic acid. For the particular day of the week upon which it was proposed to operate, sponges were removed from the jar bearing the name of that day. The sponges were removed by the bare hand of the assistant and placed in an unsterile agate-ware basin, and bichloride (1-1000) or carbolic acid (1-40) solution was poured over them. The instruments, practically all of them wooden handled, were taken from the instrument case and placed in metal pans containing 1-20 carbolic solution. The ligature and suture material was treated in the same way. Everything was then ready for the operation. Speed and manual dexterity prevailed over careful haemostasis and the gentle handling of tissues. At the end of the operation, the sponges were rinsed out in ordinary tap water and put back in the same jar until the next week. No special choice was exercised in the order of operations,—opening an infected case might just as well as not precede a clean operation.

Of course, the abdominal cavity, in fact any of the serous cavities, were rarely opened except in the case of trauma. Try to visualize, if you can, the surgery of today minus all operations involving the structures contained within the peritoneal, pleural and cranial cavities or the joints. What would it amount to? Many of the older methods of operative procedure, some of them relics of the pre-anesthetic era, were still in vogue. The attempts to introduce antiseptic methods were halting and crude, as witness the wooden handled instruments, the use of sea-sponges, the absence of any effectual method of sterilization of skin, hands, instruments, sponges or dressings, and, as a result, the almost uniform use of drainage in all wounds, and the large percentage of postoperative infections. It was a matter of comment when a case healed per primam. Heat as an agent for sterilization in the form of boiling for instruments, and the steam autoclave for dressings, was as yet not used.

Writes Dr. J. C. Warren of conditions in Boston at the time of his return from an extended period of study abroad, including personal observation of Lister and his methods, "The development of antiseptic surgery was slow, laborious and uncertain. Lister's methods were tried in both of the Boston hospitals, (The Massachusetts General and the Boston City), but for the most part of a decade, they were looked at skeptically by the older surgeons of the city, who at that time controlled the surgical field much more closely than now."

Dr. Warren gives credit to Dr. Harold C. Ernst, then bacteriologist to the Massachusetts General Hospital, for first calling to his attention the advantages of bacteria-free dressings. He at that time constructed an appliance for the sterilization of surgical dressings, probably one

of the first used in this country. This appliance was used during the winter of '87 and '88, in Dr. Warren's service in the Hospital, but for some reason, its use was thereafter discontinued, and as Dr. Warren states, "thus the Massachusetts General Hospital, which is inseparably connected with the first use of ether anesthesia, probably lost the chance of being the first hospital in the country to use aseptic surgery".

To Dr. John W. Elliott, one of the younger group, belongs the credit of being the first in Boston to discard the ordinary sea-sponge and to make use of what he called "new artificial sponges", of worsted, later replaced by gauze.

Let us now, for a moment, turn our attention to a consideration of the character of men composing the Surgical Staff of the Massachusetts General Hospital at the time of which we are speaking, a most interesting group. I could not do them full justice if I had unlimited time at my disposal, but within the limits of this address, I can only hope to refer briefly to a few of the distinguishing traits in the character and work of each of our chiefs as we, their assistants, saw them.

Sir Frederick Treves once said "men who gain distinction in medicine must possess the following qualities,—self-reliance, capacity for continuous hard work, close observation, kindness and honesty, and that they should be dogmatic when they thoroughly understand the subject". (*London Practitioner*, April 1906.) Judged by these standards, this Staff of surgeons would surely have qualified especially had their House Staff been the judges, for they had by their professional ability and consideration of our welfare, won our whole-hearted loyalty and respect.

If there is anything in heredity, Dr. C. B. Porter, then Senior Surgeon to the Massachusetts General Hospital, should have been possessed of the qualities that make for success in his chosen profession, for according to Browning in his book on "Medical Heredity," the Porter family is the longest line of direct medical descent in this country. His son, the late Dr. C. A. Porter, was the eighth generation of Porter doctors of whom there is a record of eighteen physicians in this family. Graduating from Harvard Medical School in 1865, after a year's service in the Massachusetts General Hospital, Dr. Porter entered the military service in the Civil War, where he had a very active career until its end. He had an extraordinarily good training in anatomy under Dr. Holmes, and in surgery under Dr. Bigelow, together with two years abroad in the principal continental clinics. When he automatically retired in 1903, he had taught students at Harvard and the Massachusetts General Hospital for thirty-seven years, a record almost equal to Dr. Bigelow's forty years in the same institutions. By reason of his natural endowments and close application to work, he came to be recognized as one of the soundest clinicians and one of the best surgical teachers of his time. Dr. Porter belonged to the older school. He was an anatomical surgeon par excellence. Lacking in originality, perhaps, and not so well versed in the newer developments as some of his confreres, in typical operations he was a past master. His special interests lay, perhaps, in the line of plastic surgery of all kinds, in which he excelled, and also in the perfection of his operative technique. It was a joy to behold the neatness and dispatch which always characterized his work. He never had to trim his flaps to make them fit. I shall always remember him as, in my judgment, the most finished operator that I have seen.

But beyond his clear, conservative surgical judgment and remarkable ability as an all-around general surgeon, he will be remembered by his assistants with sincere gratitude and affection for his kindly interest in their welfare, and his ready willingness to help them by his counsel and advice. As an illustration of this last characteristic, you will pardon me if I cite such an instance occurring in my own personal experience. When applying for a position on the staff of the Johns Hopkins Hospital, then about to open, at Dr. Porter's insistence, I went to Baltimore to present my application in person, armed with a personal letter to Dr. Halsted from Dr. Porter, whose house officer I was at that time. Dr. Porter had without my knowledge, secured the signature of every member of the surgical staff of the Massachusetts General Hospital to this letter. It proved a veritable open sesame to the doors of Johns Hopkins, and was the direct means of my securing the coveted appointment. It is a pleasure to acknowledge at this time and in this place my personal indebtedness to Dr. Porter, my honored teacher and kind friend, who thus made possible for me an unrivalled opportunity, otherwise unattainable.

Since the lines between the two sides, the East and the West, in the Massachusetts General Hospital were so closely drawn at that time, as a member of the West Side Resident Surgical Staff, it was not my privilege to serve as assistant to Dr. J. Collins Warren, who was a member of the East Side. Yet one could not live in the same environment with Dr. Warren without being influenced for good by his exceptional characteristics of head and heart. We were privileged, however, as students, to attend Dr. Warren's lectures on surgical pathology, in

which department he was a pioneer worker and recognized authority. His textbook on this subject was one of the earliest and most widely used in this country. As a surgeon, his work reflected very strongly the influence of his studies in Continental hospitals and laboratories. His methods more nearly resembled those of the German school than did those of any of his immediate confreres. Although an excellent anatomist and trained from his youth in that school, the early beginnings of the transition from the anatomical to the pathological era of surgery, soon to be so marked, could be readily recognized in his teachings and in his work. His was the voice of one crying in the Wilderness, "Prepare ye the way." As a surgeon, he exhibited few of the characteristics of the old school. He was neither dashing nor brilliant, but preëminently safe, sane and thorough. He seemed to combine in his methods of thought and action all the excellencies and few of the faults of his long line of distinguished medical ancestry. This background of culture and good breeding manifested itself in his every action toward his associates, his students and his patients. F. C. Shattuck, in one of his monographs, after referring to his professional ability, writes of Dr. Warren, "He was such a gentleman."

Captain John Smith, in his diary of the Expedition led by him in 1607 which founded the settlement of Jamestown, in speaking of the Chief Surgeon of that Expedition, Thomas Wotten, characterized him in two words "Chirurgeon, Gentleman." What higher praise can be bestowed upon any man than really to merit such designation, "Surgeon and Gentleman"? If one scans the roster of distinguished names, since that of Wotten, of those who, by reason of their contributions toward the relief of suffering humanity have made American surgery famous, and who can thus abundantly qualify as "lovers of their fellow-men", the names of Warren and others of his confreres, like that of Abou Ben Adhem will be found writ high on the angel's scroll.

Dr. Homans' great reputation began with his interest in and insistence upon the surgical treatment of ovarian cysts. He was one of the pioneer ovariotomists and abdominal surgeons in this country. The work that he did along these lines helped materially to pave the way for further advances in abdominal surgery. His first operation for appendicitis done in 1886 was one of the earliest successful cases recorded.

One of the most dramatic instances in my entire professional experience, one that I can never forget, was a battle royal between Dr. Homans and Dr. Fitz over the question as to whether or not a certain patient should be operated on for acute appendicitis. The patient, a boy, was the son of a doctor, a friend and classmate of Dr. Homans. Dr. Fitz had been called into the case by the father because of his recent publication on the subject. I was present in the capacity of assistant to Dr. Homans, having brought the necessary instruments, dressings, etc., for possible operation. There was no question as to the diagnosis, the only question was "to operate or not to operate". Dr. Homans, in his vigorous manner, supported the affirmative. Dr. Fitz, with equal determination, took the negative side. I have never before or since listened to a more animated debate than that carried on by these two giants. After arguing for over an hour, without the slightest impression having been made by either side upon the other, Dr. Homans, who had been for some time pacing up and down the floor, getting more vehement every minute, turned to the father of the boy, who like myself, had been a silent spectator to the duel, and calling him by name, said, "Here Fitz and I have been arguing for the past hour without getting anywhere. I don't flatter myself that I can make any impression on him, and I know damn well he can't make any on me, so we are just wasting time while the boy upstairs is suffering for want of proper attention. Somebody will have to settle this question, and it must be you." The father was, naturally, much disturbed, and, after a moment's hesitation, said he would have to consult the boy's mother before giving a decision, so he retired for a few minutes.

Dr. Homans then walked over to the window and stood looking out. Dr. Fitz sat fixed to his chair. Not another word was spoken by either one. Presently the father appeared. He asked rather hesitatingly "Is it absolutely impossible for you two gentlemen to agree?" Dr. Homans replied with promptness and decision "It is." The doctor-father than walked slowly over to Dr. Homans and, placing his hand on his shoulder, said "John, you and I were boys together; we grew up together and were classmates in College. I have always had the greatest confidence in your judgment as a surgeon. I do not know Dr. Fitz so well as I do you, but I also have great respect for him. But if you cannot agree, and I must decide between you, I will follow your advice."

Dr. Homans instantly turned to me and said, "Get things ready for operation at once." As soon as everything was ready, Dr. Homans made an incision and found free pus in considerable quantity in the peritoneal cavity. He did not search for the appendix, but simply inserted a drain. It looked for a day or two as if the boy might possibly recover, but a generalized septic peritonitis developed, to which he shortly succumbed.

Dr. Homans' great contribution to abdominal surgery was his "Report of Three Hundred and

Eighty-Four Cases of Laparotomies for Various Diseases." This was accompanied by a table showing the ultimate results of the operations.

While very positive in his opinions, with the courage of his convictions, which he had in abundant measure, always ready to go ahead with any undertaking against any odds when he thought he was right, good judgment characterized everything that Dr. Homans did.

He was very partial to the "don't" in surgery. One of his favorite dicta was "if you will state a given case to ten surgeons, and ask their opinion, nine out of the ten will tell you what to do; but the tenth will tell you what not to do, and he is the one to tie to".

"No surgical examination," he used to insist, "was complete without a catheter in the bladder and a finger in the rectum." How many failures to make a correct diagnosis would be avoided if this latter procedure was always carried out!

When I was leaving Boston, to go to Baltimore, I went to see Dr. Homans, to say goodbye. Asked if he had any advice to give me on taking up my work in a new field,—"Oh, no," he replied, "no more than you have heard me give to others a hundred times; whatever you do, don't give advice or make suggestions to another surgeon while he is in the midst of an operation. It is most disconcerting." Who has not felt the force of the evil practice against which Dr. Homans was inveighing, when some well-intentioned, but thoughtless spectator casually inquires of you just when you are deeply immersed in what you, after careful survey of conditions, have decided is the best course to pursue, "Why don't you try Jones' or Smith's method?" Such interruptions are indeed most disconcerting.

Of the two younger surgeons on the staff at that time, Drs. Maurice Richardson and Arthur Cabot, it was my privilege to observe admiringly from a distance the work of the former, and to serve as assistant to the latter, and anyone who has ever played the part of house officer to Dr. Cabot knows right well that that job was no sinecure. He, like so many of his associates, came from a long line of distinguished New England forebears, from whom he inherited traits that made him both loved and feared by his staff. He had the traditional orthodox training of the time, and had made excellent use of it. Unfortunately, he labored under a constant handicap of ill health, which probably had its effect upon his disposition, which was mercurial. At times, he would be most agreeable, a delightful and inspiring chief; at others, sarcastic to a degree, and most difficult to please. But upon occasion, he had a most intriguing smile and twinkle in his eye, to win which meant much to his house officers. He seemed to think that the mere doing of one's duty was deserving of no praise, hence he was very sparing with it. He early became so keenly alive to the close relationship of pathological and bacteriological laboratories to the proper development of modern surgery that he, together with his brother, founded a laboratory in connection with the Massachusetts General Hospital. He was a clear thinker, a forceful writer and a contributor to surgical knowledge along varied lines. Notwithstanding his apparent coldness and austerity, his unusual skill as a surgeon, his excellent judgment, his unquestioned honesty of purpose, and his rare, but highly prized words of encouragement, even his stinging reproof, usually deserved, won the wholehearted respect and admiration and, I may add with truth, the genuine affection of his staff. The following incident will serve as an illustration both of Dr. Cabot's personal characteristics and also of the stage of development of surgical antiseptic technique in the Massachusetts General Hospital at the time of which we are speaking.

Upon one occasion, when preparing for an operation for Dr. Cabot, as was the custom when one wished to exercise especial care, I collected the necessary instruments, put them in an ordinary agate-ware basin, and started for the hospital bakery, where the instruments were placed in the oven beside the loaves of baking bread for from five to ten minutes. Only dry heat could be used for sterilization purposes, and in this crude way, as all the instruments had wooden handles. On my way to the bakery, I received an urgent message to come at once to the accident room to take care of an emergency. Hurrying to the bakery, I gave the basin of instruments to the baker, with the strict injunction not to put them too close to the fire, and to leave them in the oven for not longer than ten minutes. Imagine my dismay upon my return from the accident room after a somewhat prolonged period, to find that the baker had disregarded my instructions and, as a consequence, the wooden handles of the instruments were completely charred, and, of course, utterly ruined. Anyone familiar with Dr. Cabot's reputation can judge of my state of mind. A clean breast of the matter and to take my medicine seemed to be the best policy. After I had stated the facts in the case, to my astonishment and great relief, instead of the expected storm, there appeared a smile of satisfaction on his face, and he simply remarked "Thank God, now I hope we will get some decent instruments."

Every Alumnus of the Harvard Medical School, especially every surgical house officer of the Massachusetts General Hospital of this period, will remember with pleasure the genial, handsome countenance, rotund figure and alto-

gether charming personality of Dr. Maurice Richardson. Nor can he fail to have been impressed by the excellent judgment, the extraordinary skill and transparent honesty of that most capable surgeon who was wont to charm his audience with his extraordinary skill in the use of the scalpel and the colored chalk, with both of which he was a real artist. His chalk-talks before the blackboard, illustrating his operations and anatomical demonstrations furnished opportunity to display his wonderful ambidexterity. He belonged to the anatomical school of surgeons, rather than the pathological, but he encouraged in every way progress along modern lines, such as improvements in antisepsis, and, later, aseptic technique, pathological and bacteriological studies and their practical application to surgery. He contributed in no small measure to the development of abdominal surgery, which held his especial interest. His celebrated case of successful removal of a set of false teeth from the esophagus occurred while I was resident in the Hospital. He was a pioneer in the surgical treatment of appendicitis. His first paper on the subject appeared in 1888, a little over two years after Fitz's classical description of the affection. He performed the first successful cholecystostomy in New England, and contributed greatly to the development of surgery of the biliary tract. He was a frequent contributor to current surgical literature, and his publications were always noted for their originality, honesty and sanity. Everything that he wrote could always be taken at its full-face value. Who of the resident staff of this period will forget the early morning hunts for mushrooms that took place in the Hospital grounds with Dr. Richardson leading the search?

Aside from his unusual ability as an all-around surgeon and inspiring teacher, he will always be remembered by his students as one who, from his own magnetic personality, radiated into the lives of all those with whom he came into contact, whether patient or student, hope, courage, enthusiasm and the desire to accomplish something worth while.

Of the members of the Visiting Surgical Staff, Dr. Beach was the least known to the resident staff as a whole. He was a striking personality, modest, retiring and taciturn to a degree. His own assistants were devoted to him, but the rest of the resident staff saw little of him. He was an excellent operator, decidedly conservative and with mature judgment. Having acted as Dr. Bigelow's assistant for a long time, he was thought to follow his methods more closely, perhaps, than the other members of the Staff. Aside from his ability as a surgeon, and the uniform kindness and courtesy which characterized all of his relations with members of the house staff, he will be best remembered by them for the irregular hours of his official visits. This irregularity, due, in all probability, to the exigencies of a large private practice, became so marked that one of his residents started a chart of the hours of his ward rounds, which, in the extremes it recorded, suggested a relapsing fever of a very bizarre type. Somehow or other, a report of the existence of this chart reached Dr. Beach's ears, and it was abruptly discontinued. I remember that his residents used to complain a bit at times because Dr. Beach's interest in the postoperative progress of his patients was so great that he would keep them in the wards so long that his beds were kept filled with chronics, thus, to the chagrin of the Resident Staff, preventing the admission of more acute and interesting cases.

Such was the character of men who composed the Surgical Staff of the Massachusetts General Hospital in the late eighties. It was indeed a rare privilege to receive one's training under so able a group, for the most part with the vision to glimpse the vista of unparalleled opportunities opened up by the epoch-making discoveries of Pasteur in fermentation, Lister in antisepsis, Virchow in cellular pathology and Koch in bacteriology, and with the initiative to take positions of active leadership in the revolutionary movement that accompanied the transition from the old to the new era in surgery.

And yet it must be admitted that, as a whole, the surgery that was then being done in the Massachusetts General Hospital, and it compared favorably with that done anywhere else, still savored of the old anatomical school, rather than the newer pathological-physiological variety. The surgical art predominated rather than the science. Certain members of the Staff were making a brave effort to establish on a firm basis the Listerian principles as developed in some of the more advanced German clinics, but, owing to the opposition or lack of coöperation of some of the older members of the Staff, progress in this direction was slow. However, it was not long delayed, for soon modern methods prevailed over reactionary traditions, and the Massachusetts General Hospital resumed the rightful position of leadership along this, as along other lines, which, thanks to its excellent staff, it now holds.

It was just at this juncture when surgery, chrysalis-like, was slowly emerging from its shell of empiricism and ignorance into the sunlight of knowledge based upon observation and scientific experiment, that it was my privilege to transfer my field of activity from Boston to Baltimore. But I cannot leave the revered Massachusetts General Hospital without recalling a few interesting personalities, not all members of the Surgical Staff to be sure, but of the larger Hospital family, and each contributing his or her full share, from the Superintendent,

Dr. Pratt down, to make the Hospital the delightful and efficient institution that it was. There were the other members of the resident staff, medical and surgical, there were no specialties in those days, and an extraordinarily fine group of men they were. I should like to say something about each one personally, but time forbids. There was Miss Maxwell, affectionately called "Maxie" by the Resident Staff, an exceptionally competent Superintendent of Nurses, queenly both in her personal appearance and general demeanor toward the nurses and, upon occasion, toward the internes too.

The House Staff will ever hold in grateful remembrance Miss Sturtevant the housekeeper; and Maggie the guardian angel of the dining-room, who so faithfully and well cared for the ever recurring needs of the hard-worked interne's inner man; and Fred, at the front, whose useful career met with such a sudden and tragic ending. There was Billy Cameron, the autocrat of the Hospital Apothecary Shop, and shaky Jim Mains, no less an autocrat of the Hospital amphitheatre; and John in the out-patient department. These all were integral and important parts of the Hospital organization, and one cannot give any accurate picture of the Hospital life of that period in which they do not prominently figure. The Hospital would not have been what it was without them and others of their kind, whom time forbids me to mention.

It was a great adventure to leave the Massachusetts General Hospital, with its splendid history, its interesting traditions, its delightful atmosphere so eloquently described by Cushing; to leave honored teachers and tried friends to go to a new hospital just established, with a University background to be sure, but with no traditions, everything ahead and the sky the limit. It was like entering a new world, which indeed it proved to be. Everything was so changed, the whole atmosphere of the Hospital was different; there was a new point of view, and time was no object. Here the art of surgery was over-shadowed by the science. The centre and inspiration of this changed condition of affairs was, of course, William Stewart Halsted, head of the Surgical Department of Johns Hopkins, one of the so-called "Big Four" composed of Welch, Osler, Halsted and Kelly, who were the guiding spirits in the extraordinary advances in Medical Science and Art inseparably connected with the early history of that Institution. It was my great good fortune to serve under Dr. Halsted from that time until his death, a period of over thirty-three years.

Well do I remember my first meeting with him. It took place on the day of the formal opening of the Johns Hopkins Hospital, May 7, 1889. Dr. Welch introduced me to him. This brief interview was so characteristic of the man that I venture to describe it. After a brief exchange of courtesies, without a word of inquiry as to the character or extent of my training, "When can you report for duty?" asked Dr. Halsted. My part in the conversation need not be related. Then after a few common-places and without any word as to just what was expected of me, he glanced at his watch and, pleading another engagement, excused himself and was gone. My surprise and bewilderment may well be imagined, but from that moment there was indelibly impressed upon my mind the fact that here was a most unusual and interesting personality. This impression thus early formed was strengthened and confirmed with each passing year.

I have endeavored elsewhere, all too inadequately, to express in words my great respect and admiration for Dr. Halsted as a master surgeon, and my high personal regard for and indebtedness to him as a friend.

It is a very difficult, indeed an impossible, task adequately to describe the Dr. Halsted that we, his associates and students, knew. No one could do him justice. He was such a curious mixture of contradictions; abnormally shy and sensitive; to a stranger, reserved to a degree; to his few intimates, the most charming of companions; endowed with a keen sense of humor, and an irony that upon occasion could be caustic in the extreme; of scholarly tastes and studious habits, one would not think of him as the athlete he had been in his earlier years. While in College, he was Captain of the first Varsity Football Team turned out by Yale. He was the most modest of men. Caring little for the applause of the multitude, he shrank from everything that savored of notoriety. He did his best work in the quiet of his study or laboratory, never before the crowded gallery, where he was always ill at ease.

In the conduct of his clinic, Dr. Halsted was an ardent admirer and exponent of the best in the German School in which he had been trained. His students and assistants were not spoon-fed. His idea was to help a man to help himself, not to destroy his initiative by telling him what to do next. He preferred to leave him to follow largely his own lead, helping now and then with a word of advice or warning, as the need required.

The methods employed by him in the organization of his clinic were, at the time of the opening of the Johns Hopkins Hospital, quite revolutionary, but the results achieved during the years that have passed since that date have amply justified his judgment.

Dr. Halsted's influence upon the group of younger surgeons trained by him was an unconscious rather than a conscious one. He taught by example, the best of all methods, rather than by precept. His associates were, much more than they realized at the time, deeply impressed

by his habits of thought and work. His enthusiasm, his painstaking accuracy, his close observation and his never-failing interest in studying problems with characteristic and indefatigable industry until he had at last mastered them, were most inspiring and continued unabated to the very end.

It is a wonderful record that he has made, a record that appears partly upon the printed page, partly in the current surgical thought and practice of his time, but more deeply still upon the hearts and minds of those fortunate enough to have come under his influence.

To be a great teacher, to have the ability to impart knowledge or, what is of far more importance, to be able to instil into a pupil a thirst for it, to teach him proper habits of thought and work, to inspire him to search after truth until he finds it, let it lead him where it may, is indeed a great gift. Such a teacher was Dr. Halsted.

In this presence, it would be a work of supererogation to attempt to recount or to evaluate Dr. Halsted's contributions both to the science and art of surgery. They are an open book to anyone familiar with surgical literature. Suffice it to say that they cover almost the entire range of surgical endeavor, because Dr. Halsted's interests comprehended everything that had to do therewith. His own ideals with regard to the duties of the Chief of a Surgical Clinic are thus expressed in his own words, "After all the hospital, the operating-room and the wards should be laboratories, laboratories of the highest order, and we know from experience that where this conception prevails, not only is the cause of higher education and of medical science best served, but also the welfare of the patient is best promoted. It remains with the teachers of medicine and surgery to make them so. The surgeon and the physician should be equipped and should be expected to carry on work of research; they hold positions which should make them fertile in suggesting lines of investigation to their assistants and associates; they should not only be productive themselves, but should serve as a constant stimulus to others." How well he lived up to his ideals, history and those most familiar with the work of his Clinic can best judge.

There was one interesting custom introduced by Dr. Halsted rather early in the history of the Johns Hopkins Hospital of which I cannot forbear to make mention, namely, following his example the practice indulged in by certain members of the Staff of marrying the nurses. This habit assumed almost epidemic proportions for a while, but finally was reduced to only an occasional sporadic case. Out of this romantic situation, however, and as a direct result of it, there was evolved one of the really great contributions to aseptic surgery made by Dr. Halsted. I refer to the practice of wearing rubber gloves. Miss Hampton, the future Mrs. Halsted, who was then head nurse of the operating-room, was very susceptible to both bichloride of mercury and carbolic acid poisoning. As these drugs were at that time in constant use in antiseptic surgery as then practised, her idiosyncrasy completely incapacitated her for her work. Dr. Halsted, very much interested in her disability, began a series of experiments along different lines in the search for some method of relief. He finally had made by one of the rubber goods manufacturers, thin rubber gloves for Miss Hampton's use. These proved so satisfactory, that their use extended to the Surgical Staff, first in infected cases, and finally, they were used by everybody in every case, and so became an integral part of the operating-room aseptic technique. Thus did Venus render efficient aid to Esculapius.

Associated so closely as I was with Dr. Halsted for all these years, it may be that any estimate of mine as to the value of his contributions to surgery may be colored by personal considerations. Allow me, therefore, to select from a large number of opinions as to the value of Dr. Halsted's work those of two eminent authorities, one whose judgment in all matters medical is ex cathedra, his life-long friend and intimate, Dr. Welch; the other, not a fellow countryman, but one who is himself a surgeon of international fame, who has had the opportunity upon more than one occasion to study Dr. Halsted's work in his own clinic. I refer to Dr. Leriche of France.

In the introduction to Dr. MacCallum's "Life of Dr. Halsted," Dr. Welch gives in a few words his estimate of the qualities of mind which made it possible for Dr. Halsted to accomplish the great things that he did, along both practical and scientific lines. Referring to the great change that took place in the character of Dr. Halsted's early work as compared with his later work, Dr. Welch says, "While brilliancy, boldness and manual dexterity were attributes which I used to hear applied to Halsted as a surgeon in New York, these were precisely the qualities which in Baltimore he resented and desired to be substituted by conscientiousness, thoroughness and safety." He goes on to say "Halsted often said that he found the greatest satisfaction of his life in the training of surgeons. Assuredly, the successful careers, as well as the devoted loyalty of so many of those who had the good fortune to be his pupils, assistants and resident surgeons, and were proud to call themselves of the 'Halsted School,' must have given him abundant cause of satisfaction. We, his colleagues of the Medical Faculty, always regarded Halsted as embodying the highest ideals of the uni-

versity professor, of the scientific investigator and of the Clinical teacher and surgeon."

Says Leriche (Lyon Chirurgical, October 1922),—

"Others may have been more brilliant, more seductive, perhaps, more impressive to the passing visitor; but the impressions left by the spectacular operators are ephemeral, transient, and easily erased; because generally those who are called great operators only leave their imprint upon the shifting sands of time. Halsted's performance was of a different sort. It is destined to endure and to last long after him, because he dealt with the understanding of things; because he built upon the very rock upon which the foundations of surgery rest, and upon which, as a branch of the healing art it is based.

"As an operator, Halsted, like Terrier and like Kocher, was the Father of a School of Surgery, which may be described as the Surgery of Safety; of a technic which sacrificed everything to the immediate and future success of the operation and the welfare of the patient. He put in force the most rigorous asepsis and the most uncompromising discipline in guarding the tissues from insult, by neglecting no details, no matter how small, that might compromise the issue and the thoroughness and finish with which he carried out the operative act.

"Beginning at a time when surgery was still living under the spell of the preanesthetic days, when rapidity of execution was given the highest premium, he stood firm on the ground that the nature of the material upon which the surgeon exercised his handicraft is too noble and too precious to be insulted with impunity, or to allow even the smallest living particle to be wasted; that, to do this effectively, the surgeon must subordinate brilliancy and rapidity to safety."

Such then was the Halsted that we, his associates, know. His title to fame rests securely among others, upon four grounds in which he especially excelled, as teacher, surgeon, investigator and founder of a school of surgery. He was a great teacher, as has already been said, by example rather than by precept. Mediocrity did not interest him, nor did it understand him, there was little in common between them, but between him and the comparatively few brilliant intellects in each class, there seemed to be an instinctive affinity. They understood each other's language.

He was a great surgeon, not a brilliant operator in the ordinary acceptation of the term. But what he lacked in manual dexterity, he more than made up in scientific thoroughness, absolute asepsis, the gentle handling of tissues, the most meticulous hemostasis, the avoidance of interference with the blood supply, the exact coaptation of opposing structures, the careful application of dressings and bandages, and subsequent physiological rest. Herein lay the secret of his great success.

That he was an investigator is attested by his many valuable original contributions to surgical knowledge, too numerous to mention here. That he founded a distinctive school of surgery is generally conceded, the characteristics of which are those just ascribed to the founder himself, and which are being carried on with renewed vigor today by his worthy successor, Dr. Lewis. How well he has fulfilled the important conditions attached to the founder of any new system of thought or action, namely, the training of others to propagate the new doctrines is shown in the number and importance of the clinics in the country today that have as their heads men trained by him.

No reference to the early days of the Johns Hopkins School of Surgery would be complete without giving full credit to the creative genius of that extraordinarily versatile and many-sided master of pelvic and abdominal surgery, Howard A. Kelly. Any one at all familiar with the amount and variety of Dr. Kelly's work in the nineties and the early decades of this century will recall him as without doubt the most brilliant operator of his time, not only wonderfully skilful in the performance of difficult and unusual surgical procedures, but a pioneer along many lines. He has made contributions of great value to our knowledge of the pathology and operative treatment of diseases of the pelvic organs, bladder, rectum, kidney, ureter, appendix and other viscera. His activities have not been confined to surgery alone, but they cover an extraordinarily wide range of subjects. His bibliography, beginning in 1882, covers more than five hundred titles, including books, pamphlets and journal articles in several languages and upon almost every conceivable subject, medical, historical, biological, sociological, biographical and religious. Indeed, there are few matters that have escaped his attention.

Not the least of Dr. Kelly's contributions to surgery is the introduction of real art in medical illustrations by inducing Max Broedel to come to this country and develop at Johns Hopkins the Department of Art in Medicine.

Dr. Kelly is also the founder of a school of gynecology and abdominal surgery and has trained many of the leaders active today in this branch of medicine. A unique personality, he is greatly beloved by both patients and associates. His many contributions, both to the science and art of medicine and, in recent years, to our knowledge of the physical properties and therapeutic uses of radium, have greatly enriched the armamentarium of the Surgeon. He has made an imperishable record of achievement. His

work marks a most important epoch in medical history.

Lack of time prevents me from doing more than merely mention the important part played in the early development of the Johns Hopkins Hospital and Medical School by a group of Harvard medical graduates trained in the Massachusetts General Hospital. Among these are Dr. Jacobs, for many years an active and honored member of the Board of Trustees of the Hospital; and the gifted Thayer, close associate, trusted friend and some-time successor to the Chair of the beloved "Chief," Dr. Osler; and your own Cushing, who exemplifies in his work the best traditions of both schools. The reciprocal effect of the interchange between the two schools of representatives from each has been most happy, as in addition to those already mentioned, witness the splendid work of Councilman, and the lamented Wright, and Christian, Strong and Hunt, to name only a few.

But I fear that I have already unduly wearied you by this very sketchy account of the way in which surgery was practised and of those who practised it in the Massachusetts General Hospital forty odd years ago as contrasted with that done by Dr. Halsted and his Staff in the Johns Hopkins Hospital during the same period. Viewed in retrospect after all these years, the only essential difference that appears between the work of the two Schools was that inherent in the differing reactions of youth and maturity toward anything new and strange. The older, more conservative institution experienced difficulty in accepting and adapting itself to the exactions imposed by antiseptic surgery, while the younger one, unhampered by customs and traditions and with open mind, was free to accept and put into immediate practice methods, the value of which had been already fully demonstrated in the Continental clinics.

Turning now from the contemplation of the past, from the vantage point of the present the temptation is strong to indulge in propheey as to the future. But mindful of the egregious failures in the past of certain distinguished members of the Profession who have essayed the rôle of prophet, I will forbear from anticipating what the recipient of the Bigelow medal will have to say when fifty years hence, upon an occasion similar to this, he comes to chronicle the events that will have taken place in the world of surgery during the next half century. I will, therefore, leave your several imaginations to suggest the particular lines along which progress will take place.

DR. RUSHMORE:

It is with very great pleasure that on behalf of the Boston Surgical Society and of our guests, I express to you, Sir, our heartfelt thanks, and our high appreciation of the honor you have conferred upon us in coming to us tonight and delivering this interesting, scholarly and masterly address, and as Chairman of this meeting, I declare the formal exercises of the evening to be closed.

CONGENITAL OBSTRUCTION OF THE DUODENUM IN CHILDREN*

BY WILLIAM E. LADD, M.D.†

ACCORDING to Barrington-Ward, the first case of congenital obstruction of the duodenum was reported by Calder in 1752. From that time to the present day there have been numerous articles on the subject, many of which have been simply reports of autopsy findings in individual cases. In a few of the articles the author has undertaken to explain the etiology of the condition. In 1889, Bland-Sutton stated that the occlusions always take place at the site of an embryologic event and explained the occurrence of duodenal atresia as caused by excess of closure while the liver was being formed. Others thought that fetal peritonitis and syphilis caused these conditions. It is only within the last decade or two that the etiology has been logically explained.

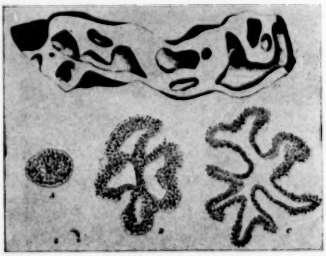

FIG. 1. Cross and longitudinal sections showing normal obliteration of the lumen of the duodenum in the embryo between 7 mm. and 30 mm.
Taken from "Human Embryology," by F. Keibel and F. P. Mall.

The condition is rare enough so that it is likely to escape the mind and it is common enough to be important. Timely and suitable surgical intervention offers the only chance for cure and restoration of the health of these patients.

The congenital obstruction of the duodenum is a manifestation of faulty embryologic development and in order to understand the condition, a review of the normal embryology is necessary. These obstructions may be grouped into two classes; the intrinsic or intramural type in which the obstruction is caused by septa within the lumen of the bowel, and the extrinsic, or extramural type in which the obstruction is caused by pressure on the outside of the bowel.

According to Tandler, Forsner, Lewis and others, in the embryo of six to seven mm. the duodenum presents a well-defined, round lumen lined with epithelium. At a later stage of embryonic life, the epithelium proliferates forming vacuoles within the lumen. As the proliferation of the epithelium continues, the original lumen becomes bridged and subdivided by septa. These epithelial septa completely block the passage from the stomach to the jejunum. If the development is arrested at this stage, the lumen of the duodenum remains partially or completely obliterated, as the case may be. If, however, development continues normally, at the time that the embryo has grown to 30 mm. the vacuoles become confluent and the central lumen is re-established. The villi are the only remaining evidence of the projections between the vacuoles.

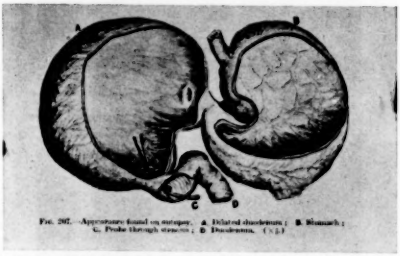

FIG. 2. Pathologic specimen reported by Gordon, showing the obstruction and dilatation of the duodenum due to septa across the lumen.
Reprinted from the *British Journal of Surgery*, Oct. 1930.

In our experience, the extrinsic type is dependent on an incomplete rotation of the bowels. Between the fourth and fifth week of embryonic life, the mid-gut and liver grow so rapidly that there is inadequate space within the abdomen for the various organs which must eventually occupy this cavity. To meet this situation, nature forces the mid-gut into the base of the umbilical cord causing a temporary, normal, physiological umbilical hernia or omphalocele. By the tenth week the abdominal space has enlarged sufficiently to accommodate its contents. The mid-gut returns to the abdomen and the normal rotation progresses rapidly so that by the end of the eleventh or twelfth week the cecum has assumed its normal position in the right iliac fossa and the mesentery of the small bowel has acquired its normal, oblique attachment to the posterior abdominal wall. Complete failure of rotation leaves the whole mid-gut, that is, the intestine from the fixed point of the duodenum to the middle of the transverse colon, attached to the posterior abdominal wall by only a very small

*Read before the Boston Surgical Society, April 6, 1931.

†Ladd—Chief of Surgical Service, Children's Hospital. For record and address of author see "This Week's Issue," page 300.

area at the origin of the superior mesenteric artery. As one can readily see, this leaves an excellent opportunity for a volvulus of all of the intestine from the duodenum to the middle of the transverse colon to take place. Such a volvulus has occurred in several of our cases, the point of obstruction being in the third portion of the duodenum. Where failure of rotation is less complete, the cecum may have advanced to a point just to the right of the duodenum and become attached there to the posterior abdominal wall, pressing on the duodenum and constricting its

FIG. 3. Drawing showing the faulty attachment of the mesentery at the point of the origin of the superior mesenteric artery.

lumen. We have seen this condition in two instances.

The most important feature leading to a diagnosis of this condition is vomiting. In the patients with complete atresia, it begins shortly after birth. The vomiting is explosive in character resembling that of pyloric stenosis. It differs from that of pyloric stenosis in its time of onset. The content of the vomitus in duodenal obstruction contains bile, whereas that in pyloric stenosis does not. On physical examination, visible, gastric peristalsis can be seen and occasionally duodenal peristalsis is obvious. The pyloric tumor, of course, is absent. Confirmatory evidence of the obstruction may be obtained by x-ray with or without a barium meal. In cases of complete atresia, there being no gas below the point of obstruction, an x-ray taken without the ingestion of barium gives conclusive evidence of the point of obstruction. In cases of partial obstruction there is gas throughout the intestines so that an x-ray without the ingestion of barium is of no value. Patients with complete atresia who are not operated on die of inanition usually within ten days after birth, although there are a few cases in the literature of patients who lived for an extraordinary length of time. Patients with incomplete obstruction may present symptoms soon after birth and may live for a considerable period of time with very little disturbance. In these cases, the duodenum enlarges to a much greater extent than in the patients with complete atresia. Vomiting is the important symptom but it is intermittent in character, patients going weeks or even months without symptoms. During the periods when obstruction is taking place, associated with the vomiting, distention of the epigastrium with visible, gastric peristalsis and evidence of an enlarged stomach are the important physical findings. The infants are usually poorly developed and nourished and their weight considerably below normal for their age.

It is surprising that in a careful review of the literature I am able to find but ten cases successfully treated. It is possible that some cases may have been missed or that there are successful cases unreported. It is certain that successful results should be much more common. In 1916,

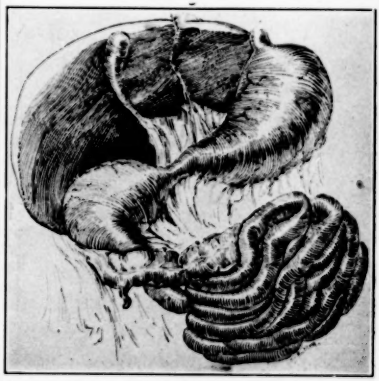

FIG. 4. Obstruction and dilatation of the duodenum caused by the mesenteric attachment of an unrotated and undescended cecum
Case No. 112762.
Reprinted from the *Pennsylvania Medical Journal*, Dec. 1930.

Ernst reported the case of an eleven-day-old infant with atresia of the duodenum successfully treated by anterior duodeno-entero-anastomosis. In 1925, Bolling reported one case of atresia in a girl baby of nine days, treated successfully by duodeno-jejunostomy. Jewesbury and Page, in 1922, reported the case of a girl twelve days old with an obstruction due to a non-rotation, successfully treated. Rixford reported a case in 1929 of a boy five years old in whom they had successfully reduced a volvulus. In a recent paper by Webb and Wangensteen, six successful cases were reported from the literature. Gastro-enterostomy was performed on four of these patients. One other infant of nine days who did not be-

come relieved by gastro-enterostomy, became well following a later duodeno-jejunostomy. The type of operation in the sixth patient was not stated.

There are a few points in the operative technique which seem to me worthy of mention. In the patients with an intrinsic type of obstruction, especially those with stenosis rather than complete obstruction, the duodenum may assume enormous proportions and by pushing the cecum and ascending colon to the left side of the abdomen, lead one to believe erroneously that it is a case of non-rotation. In such instances it is best to disregard the question of rotation and perform a duodeno-jejunostomy at once. In cases of complete intrinsic atresia, the question of per-

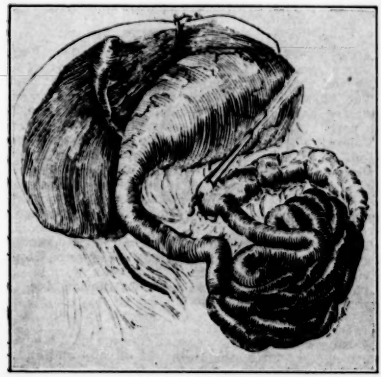

FIG. 5. Successful method of relieving duodenal obstruction by freeing the mesenteric attachment of the cecum and bringing the duodenum out to its right side.
Reprinted from the *Pennsylvania Medical Journal*, Dec. 1930.

forming a gastro-enterostomy or a duodeno-jejunostomy would automatically seem to be decided by the position of the atresia. If the atresia is above the ampulla of Vater, gastro-jejunostomy is the operation of choice. When the atresia is below the ampulla of Vater, duodeno-jejunostomy is theoretically preferable as it gives better drainage for the distended duodenum and better contact with the pancreatic and biliary secretions. In the smaller infants the anastomosis itself presents some technical difficulties. The distal loop to be anastomosed is so small that the use of a clamp is unnecessary and undesirable, but a clamp may be used on the proximal portion. Chromic No. 000 catgut is used for the first layer of over and over suture and this is reinforced with a Connell stitch of fine silk. The tissues are so delicate that coarser material is likely to cause leakage and on very small infants it is desirable to omit the catgut altogether and rely on one row of silk inserted by the Connell method as recommended by Wangensteen.

On opening the abdomen of a patient with volvulus due to congenital faulty rotation the picture is likely to be very confusing. The situation is somewhat simplified if one will remember that this type of volvulus differs from that found in the adult in that the two ends of the volvulus are not obstructed simultaneously, the duodenal end always being obstructed first. For this reason one does not find as much distention in the

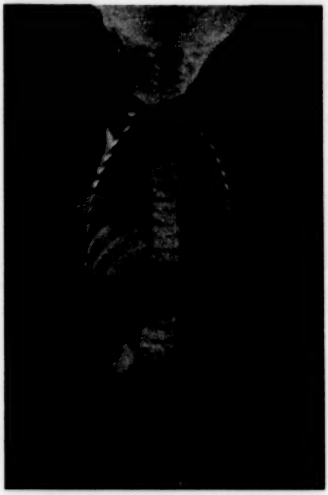

FIG. 6. X-ray plate of a patient with complete duodenal obstruction which shows clearly the point of obstruction without the administration of barium.

whole small bowel as one would expect. The volvulus takes place in a clock-wise direction. The features which make the diagnosis certain are a markedly dilated duodenum, a misplaced cecum, the rest of the small intestine markedly congested and moderately dilated, and an empty large bowel. Though shocking, we feel that the only way to reduce this volvulus is by delivering the whole small bowel and untwisting it. In cases of duodenal obstruction caused by pressure of an undescended cecum without volvulus, the cecum is freed from its attachment to the post-abdominal wall and the duodenum uncovered by it to its juncture with the jejunum. This practically restores the condition that exists in an earlier stage in embryologic development but leaves the duodenum free from constriction and capable of functioning normally.

Because of the frequency of postmortem re-

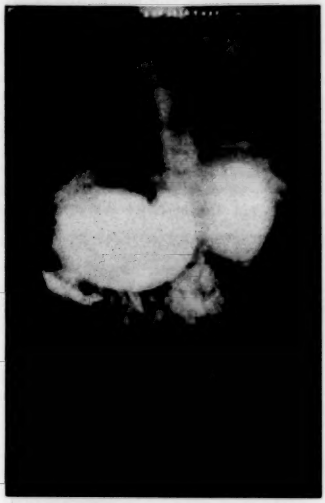

FIG. 7. X-ray plate taken four hours after a barium meal showing dilatation and obstruction of the duodenum. Case No. 143386.

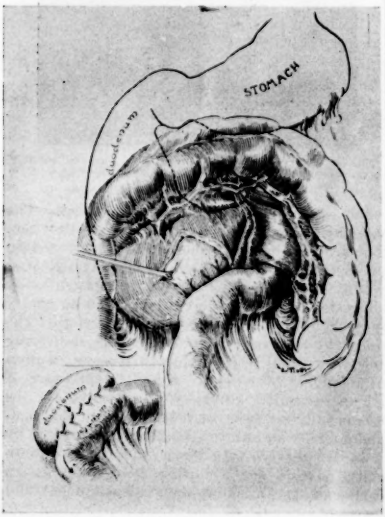

FIG. 8. Drawing showing method of doing posterior duodenojejunostomy as performed in Case No. 143386.

ports of these cases and the infrequency of these conditions in adult life, one infers that the mortality is high without surgical intervention. The fact that we have had ten of these cases in a comparatively short period of time, leads one to believe that we have undoubtedly overlooked these cases in the past and that they are more common than has been supposed. That seven of these ten patients have been apparently cured by operation, emphasizes the importance of recognizing the condition and giving such patients the benefit of surgery. In our experience, the operations which have proved successful are posterior gastro-jejunostomy, posterior duodeno-jejunostomy, reduction of mid-gut volvulus and freeing of cecal attachments.

REPORT OF CASES

Baby H.—C. H. A5528.

A two weeks premature baby weighing 4 lbs. 12 oz. at birth, was first seen at the age of 4 days. The baby had vomited everything since birth.

The physical examination revealed a slightly dehydrated baby with a distended abdomen and visible peristalsis over the epigastrium.

Following a barium meal, x-ray showed complete retention in the stomach after four hours.

Preoperative diagnosis:—Duodenal obstruction.

At operation a distended stomach was found and the small bowel was collapsed. There was no evidence of mal-rotation. Posterior gastro-enterostomy was performed.

The baby was discharged after an uninterrupted convalescence and was last seen six months later having developed normally.

This was probably a case of obstruction due to septum in the duodenum.

E. G.—C. H. No. 119222.

A baby boy was first seen at the age of 3 weeks. His weight at birth was 10 lbs. 12 oz. and on admission, 8 lbs.

He had vomited everything projectilly since birth and had gradually lost weight.

Physical examination showed evidence of dehydration and visible peristalsis in the epigastrium.

Preoperative diagnosis:—Pyloric stenosis.

Operation disclosed a greatly dilated stomach and duodenum. The jejunum and ileum were small and contracted. Stricture was thought to be in the third portion of the duodenum or above the ligament of Treitz. Gastro-jejunostomy was performed.

The patient died shortly after operation.

At autopsy, the stomach was found to be markedly dilated; the pylorus widely dilated with no thickening of the musculature; the first and second portions of the duodenum were markedly dilated with a very thin wall. At the juncture of the second and third portions of the duodenum, there was a stricture of the lumen which was patent. No constricting bands of fibrous tissue were found. There was no faulty rotation.

A. R.—C. H. No. 143386.

A baby boy first seen at the age of 14 months had developed normally up to 11 months when he began to vomit. From the eleventh month to the fourteenth month he had lost 6 lbs. in weight.

On physical examination the child appeared emaciated. The epigastrium was distended and a tympanitic swelling extended down to the right iliac fossa.

X-ray following a barium meal showed a dilated stomach and duodenum with retention in both.

Preoperative diagnosis:—Duodenal obstruction. At operation the duodenum was found dilated to almost the size of the stomach. The wall was considerably thickened. The pylorus was markedly dilated. The duodenum was so large that it had pushed the ascending colon and cecum to the left side of the midline. This gave the erroneous impression of a non-rotation. The cecum and ascending colon were therefore freed until the duodenum was exposed. Following this procedure gas passed readily into the jejunum and it was hoped that the obstruction was relieved.

Subsequent to operation, the symptoms persisted and six weeks later posterior duodeno-jejunostomy was performed.

Following this operation the child convalesced satisfactorily and had no more vomiting. He acquired pneumonia, however, which impeded his progress. Two months later he was seen in excellent health and gaining rapidly.

R. S.—C. H. No. 144796.

A two weeks premature girl baby weighing 4 lbs. at birth was seen at the age of 4 days. The symptoms began 17 hours after birth with vomiting. The baby vomited everything thereafter. The vomitus contained bile.

Physical examination showed a dehydrated baby with a full upper abdomen and visible peristalsis running from left to right. Just to the right of the umbilicus, peristalsis from right to left in a lesser degree was seen.

X-ray examination showed a markedly distended duodenal loop filled with air. No air was shown below the duodenum.

Preoperative diagnosis:—Duodenal obstruction. Laparotomy was performed. The intestines were in a confused, abnormal position. The cecum was non-rotated and attached on the left side. The colon presented two loops which were adherent to the stomach. The duodenum was dilated and there was an obstruction in the third portion. The jejunum and the rest of the small intestine were collapsed. Anterior duodeno-jejunostomy was performed and following this the jejunum filled with gas.

The baby died 53 hours after operation.

At autopsy the anastomosis was in good condition and without leakage or any evidence of peritonitis. The hepatic flexure had apparently advanced to its normal position leaving the cecum behind and to the left of the midline. The point of obstruction was in the third portion of the duodenum.

An unrotating operation was not considered technically feasible in this instance. The cause of death was failure of the collapsed gut below the anastomosis to dilate sufficiently to maintain life.

L. C.—C. H. No. 112762.

An 11 year old girl was admitted to the Medical Service. She had always been underweight and had a poor appetite. Except for one attack of diarrhea, she had been apparently healthy.

A week prior to admission the girl was taken with abdominal cramps and vomiting. Four days after the onset she was slightly jaundiced.

On admission, the striking features of physical examination were the appearance of a sick child, slightly jaundiced and vomiting. The vomitus contained bile. The liver was palpable and slightly tender. There was no abdominal distention, no visible peristalsis and no masses.

The diagnosis at this time was catarrhal jaundice and acidosis. The patient remained in the Medical Ward for six days. Her acidosis was overcome, the vomiting which had been persistent, lessened and her general condition improved. On the sixth day she became very much worse, vomiting again became persistent and her pain more severe. Abdominal examination showed slight distention in the epigastrium and apparent peristalsis there and in the right upper quadrant. A diagnosis of intestinal obstruction was made.

Operation was performed. The duodenum was found to be dilated to approximately one-half the size of the stomach. Obstruction was at the point where the unrotated cecum was attached to the posterior abdominal wall across the duodenum. An incision was made in the posterior parietal peritoneum. The cecum with its attachment was moved to the left of the duodenum and the latter left extending directly to the jejunum with no colon in front of it.

The patient had an uninterrupted convalescence. A year and a half later she had gained considerably in weight and had had no further difficulties.

J. McI.—C. H. No. 133913.

A baby boy was admitted to the Children's Hospital at the age of 14 days. The baby did well for the first 10 days of life without symptoms. On the eleventh day he began to vomit projectilly. The vomitus contained bile. The stools became diminished in amount.

The only striking feature of the physical examination was marked visible peristalsis in the epigastrium.

Following a barium meal, x-ray showed a dilated stomach and duodenum with retention in both. The impression gained from x-ray was almost complete obstruction in the third portion of the duodenum.

At operation, a collapsed jejunum and small intestine were found. The stomach and duodenum were markedly dilated. The colon was non-rotated and the cause of the obstruction was apparently a volvulus of the whole small intestine. This was untwisted. The jejunum and small bowel filled readily and the intestines were returned to the abdomen.

After a very stormy convalescence, the baby recovered. Two weeks after discharge the baby had gained considerable weight and appeared well.

P. M.—C. H. No. 130958.

A nine months' old boy was admitted with a history of intermittent vomiting since birth. There was nothing marked on physical examination except dehydration and evidence of malnutrition. The day after admission the vomiting became very persistent and distention in the epigastrium was noted. The baby was transferred to the Surgical Service with a diagnosis of high intestinal obstruction.

At operation a volvulus of the whole small intestine was found associated with an unrotation of the colon. The volvulus was untwisted and nothing further was done at this operation.

The baby's convalescence was uneventful and he was discharged at the end of ten days.

The same symptoms recurred two weeks after discharge and a month afterwards the baby was readmitted and a second operation performed.

At this time the attachment of the cecum just to the right of the duodenum and jejunum was freed by an incision made in the posterior parietal peritoneum and the cecum and ascending colon were moved to the left until the duodenum and jejunum were entirely free.

Following this operation the baby recovered after a stormy convalescence. He was seen a month later in very good health.

D. D.—C. H. No. 85556.

A 17 day old baby was admitted because of vomit-

ing since birth. The vomiting had increased in intensity during the last few days.

Physical examination showed an undernourished and dehydrated baby with visible gastric peristalsis.

Preoperative diagnosis:—Pyloric stenosis. At operation, no stenosis of the pylorus was found and nothing further was done at this time.

The symptoms persisted and 12 days later the baby was in extremis. Jejunostomy was performed in the hope of getting the baby in sufficiently good condition to perform gastro-enterostomy later.

Four days subsequently the baby died. Autopsy of the gastro-intestinal tract showed an unconstricted pylorus, somewhat dilated and with a distinctly thickened wall. The first portion of the duodenum was dilated. In the region of the ampulla of Vater there was a marked constriction and a probe entered into the lumen from above and below this point was arrested in both cases. On further dissection the lumen was found to be blocked at this point by a membranous diaphragm which extended across the lumen of the duodenum at an angle of 45 degrees. The lumen of the duodenum was considerably narrowed at this point and it appeared that it would not have offered much resistance to the passage of food except for the membranous diaphragm passing across it.

R. R.—C. H. No. 124902.

A four and one half months' old baby boy was first seen in the Out Patient Department. He weighed 7 lbs. 10 oz. at birth and had gained two lbs. since that time. During the last month he had had intermittent spells of vomiting, not projectile and containing bile. At this time there was marked distention of the epigastrium and visible peristalsis. A diagnosis was made of a congenital defect.

An x-ray taken following a barium enema demonstrated a non-rotation of the colon.

The baby was admitted to the Infant's Hospital and stayed there for some time having occasional attacks of vomiting and failing to gain in weight. Operation was considered at that time but was delayed as the baby did not seem to be losing ground.

Two years later the child was admitted to the Surgical Service. He had had periodic attacks of vomiting during the interval. These attacks had not been associated with pain until recently but had increased in frequency for the last two months.

The day before the child was readmitted he had had a severe attack of vomiting associated with pain.

On examination, the child was found to be poorly developed, ill looking, considerably dehydrated and weighing 22 lbs. The abdomen was greatly distended especially in the upper half.

Operation was performed. The stomach was found distended and the pylorus wide open and dilated to considerably more than its normal size. The duodenum was dilated and the wall thickened. The cecum was in the left upper quadrant in the position of the normal splenic flexure. The transverse colon had crossed over the duodenum. Incision was made in the posterior parietal peritoneum and duodenum was freed until it joined with the jejunum without constriction. The cecum was placed in its normal position in the right lower quadrant, the small intestine returned to the abdominal cavity and the abdominal wound closed in layers.

The postoperative convalescence has been uninterrupted and the child appears well.

Two weeks prior to operation on this child, another infant was born in the family who died of multiple congenital atresias.

Case	Age and Sex	Symptoms	Type	Operation	Result
A-5528	M. 4 days	Vomiting everything since birth.	Intrinsic	Post. Gastro-Enterostomy	Recovery
119223	M. 3 weeks	Vomiting practically everything since birth.	Intrinsic	Post. Gastro-Enterostomy	Died
143386	M. 14 months	Vomiting starting at 11 months with loss of 1/3 weight following 5 months.	Intrinsic	Post. Duodeno-Jejunostomy	Recovery
144796	F. 4 days	Vomiting everything since birth.	Extrinsic	Ant. Duodeno-Jejunostomy	Died
112762	F. 11 years	Always under weight, poor appetite. Acute symptoms—high intestinal obstruction 1 week duration.	Extrinsic	Unrotating of cecum and freeing duodenum	Recovery
113913	M. 14 days	Vomiting beginning on 11th day.	Extrinsic	Untwisting of volvulus and freeing of duodenum	Recovery
130958	M. 9 months	Acute persistent vomiting.	Extrinsic	Untwisting of volvulus and freeing of duodenum	Recovery
85556	M. 17 days	Vomiting since birth.	Intrinsic	Jejunostomy	Died 4 dys. after operation
124902	M. 4½ months	Vomiting since 3rd month.	Extrinsic	Unrotating of cecum and freeing of duodenum	Recovery
B. I. H.	F. 4½ weeks	Vomiting since birth, more excessive after 10 days.	Extrinsic	Unrotating cecum and freeing duodenum and jejunum	Recovery
3599	F. 6 days	Vomiting since birth.	Intrinsic	Post. Gastro-Enterostomy	Recovery

J. S.—B. 1.

A baby girl, four and one half weeks' old and weighing 8 lbs. at birth presented the following history. During the first two weeks the baby was breast fed and vomited part of most of the feedings. The vomitus contained bile. At the end of two weeks formulas were tried which did not affect the vomiting, which became more projectile in character. The stools became small and dry and the baby lost one pound in weight.

Physical examination showed a dehydrated baby with visible peristalsis running from left to right in the epigastrium. Small peristaltic waves were apparent in the right upper quadrant running toward the umbilicus.

X-ray following a barium enema showed coils of large bowel occupying the left side of the abdomen. No cecum or ascending colon could be made out in the right side.

Preoperative diagnosis:—Nonrotation of the cecum with duodenal obstruction.

At operation, when the peritoneum was opened, a little cloudy fluid was seen and a culture was taken. The pylorus was wide open and there was no pyloric tumor. The duodenum was thickened and dilated, its wall being almost as thick as that of the stomach. The cecum and appendix were found to the left of the midline. The child was eviscerated and the midgut was rotated in anti-clockwise direction. This was found to relieve the obstruction. The small bowel was traced up until it was found that the jejunum perforated the mesentery of the ileum about three inches from the ileocecal valve. Posterior parietal peritoneum was then cut and the peritoneum of the mesentery of the cecum and ileum below the point where the jejunum perforated it. This was freed and the mesentery separated until the point of perforation of the mesentery was reached. This now left the duodenum continuing into the jejunum without constriction. The intestines were returned to the abdominal cavity, the cecum being placed down in its normal position.

The baby had no vomiting whatsoever, after the operation. She gained twelve ounces in the following eight days and was discharged from the hospital on the tenth day apparently well.

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PIONEER INSTITUTION OF POST-GRADUATE MEDICAL STUDY CELEBRATES HALF-CENTURY OF PUBLIC SERVICE

Dr. Ray Lyman Wilbur, Secretary of the Interior, speaking at the Fiftieth Anniversary Dinner of the Faculty Association of the New York Post-Graduate Medical School and Hospital, at the Hotel Biltmore, January 30, remarked the length of time it had taken educational and governmental forces to grasp the importance of New York as a graduate medical center, and expressed hope that the profession of the city, as well as the universities and institutions in it, would be able to get into higher gear in the field of medicine.

"In the United States," said Secretary Wilbur, "we have not provided such opportunities for keeping the doctor up-to-date as might be expected with all of our wealth and our manifold medical interests. We have been concentrating, for the last quarter of a century, on the better training of men seeking the degree of Doctor of Medicine. The amalgamation of the medical schools with the universities and the installation of the scientist into the medical school have consumed most of our energy. Bringing the hospital into the medical school and conducting it upon an educational basis have also reacted largely to the benefit of the undergraduate medical student. There has been some attempt to give clinical experience and training to the physicians alongside of the young men who were in the cub stage of medicine, but we have had too few institutions concerned with offering adequate opportunities to the physician himself.

GRADUATE MEDICAL CENTERS COMPARABLE TO THOSE OF EUROPEAN CAPITALS LACKING IN U. S.

"It has been a surprise to me in watching the developments in New York to see how long it has taken for the educational and governmental forces to grasp the importance of New York as a graduate medical center. The New York Post-Graduate Medical School and Hospital," said Secretary Wilbur, "has an honorable record of fifty years of service but it has not had the backing that it should have received."

The dinner, which was attended by some five hundred guests and members of the Faculty Association, was in celebration of founding, in 1882, the New York Post-Graduate Medical School and Hospital, the first institution in this country to make provision solely for the further education of the doctor after he had obtained his medical degree.

Speaking for the Faculty Association, of which he is Chairman, Dr. John F. Erdmann applauded the Board of Directors and the Honorary President, Dr. James F. McKernon, for their work in effecting the consummation of a university affiliation, and, in introducing the toastmaster, Dr. Arthur F. Chace, President of the Post-Graduate Medical School and Hospital, he pledged the whole-hearted support and

(Continued on Page 290)

NEW ENGLAND SURGICAL SOCIETY

DIVERTICULA OF THE INTESTINE*

BY JAMES W. JAMESON, M.D.†

DIVERTICULA of the intestine may occur at any point from the duodenum to the sigmoid and may be single or multiple, true when they include all coats of the intestine, or false when the muscular coat is missing. Both varieties can be congenital or acquired, but usually the latter variety is the acquired type and occurs between the layers of the mesentery or near the mesenteric attachment. They are more common after middle life. True diverticula are due to failure in closing of the embryonic remnants, traction by adhesions, or adherent tumors[1].

Duodenal diverticula have been diagnosed and operated on with increasing frequency since 1915 when the first case was operated by Forssell, but the diagnosis has been made mainly by x-ray rather than by any definite symptoms which are characteristic of the lesion[2]. Cases with definite symptoms are reported in which improvement has taken place under medical treatment[16]. These diverticula vary in size from a pea to two inches in diameter and are occasionally multiple, occur most frequently in the second and third portions of the duodenum and the region of the papilla of Vater where they may encroach upon the head of the pancreas. A case of this kind in which glycosuria occurred was operated upon by Pool[15] with relief of the condition. While some of them are congenital, most are acquired and oftentimes associated with duodenal ulcer. Weakness of the intestinal wall, probably congenital, and increased pressure due to difficulty in emptying the intestine may account for those diverticula which are not due to traction from adhesions. Pseudodiverticula, in which a side pocket exists in the lumen due to reduplication or relaxed intestinal wall, occasionally occur[5].

Inflammatory changes may take place especially in diverticula with small lumens and it is probably the diverticulitis which produces the symptoms. These are symptoms which suggest ulcer or disturbance of the gall bladder, and lesions in the stomach and gall bladder must be ruled out before attributing the cause to diverticulitis. Perforation of a diverticulum resulting in the death of a patient sixteen years old is the only non-operative fatality in a report of 207 cases of duodenal diverticula reported by Hahn[8]. Of the 207 cases, 123 were autopsy findings. Primary carcinoma of a diverticulum has been reported by Morrison and Feldman[12].

Excision of the diverticulum, or infolding, depending upon the size, is a comparatively simple procedure where the diverticulum is present on the antemesenteric attachment of the duodenum, but presents greater difficulty and is a more dangerous procedure when it is located between the layers of the mesentery. Simons[19] reports a case of multiple small diverticula in the duodenum and upper jejunum located between mesenteric leaves in a patient with symptoms of perforated gastric ulcer. The small bowel was discolored and distended and there was an anemic area in the mesentery; however, the symptoms were probably not due to diverticula but to extravasation of chyle from a ruptured lymphatic.

A diverticulum occurring in the terminal ileum, usually less than three feet from the ileocecal junction, has been called Meckel's diverticulum after John Frederick Meckel who first accurately described the condition in 1812[13]. It is present in about 2% of individuals and is more common in males. The omphalomesenteric or vitelline duct, which in fetal life connects the yolk sac with the mid gut, normally atrophies about the eighth week, atrophy beginning at the distal end[2]. Failure to atrophy completely results in a diverticulum which varies in size from a small conical protrusion to one 33½ inches long[11]. Its diameter may equal that of the parent gut or it may be only a thin cord. Usually it springs from the antemesenteric border of the ileum but occasionally from the side. It does not have a mesentery and is a true diverticulum with all coats of the bowel present. Gastric mucosa is at times present in the diverticulum and this may account for the occurrence of intestinal hemorrhage from an ulcer in the diverticulum[21]. Attachment of the free end of the diverticulum may result in intestinal obstruction and should be considered in all cases of obstruction which have not been previously operated on. Harbin[6] reports 10 per cent. of obstruction cases due to Meckel's diverticula. Malignant growth in a Meckel's diverticulum has been reported in only eight cases, and in a case of fibrosarcoma reported by Faust and Walters[3] a tumor seven cm. in diameter was found on exploration. Repeated tarry stools with discomfort in the lower abdomen were the only symptoms. No tumor had been felt and laboratory examination failed to disclose the condition.

Reed[18] reports a case operated on for appendicitis in which the cecum had not rotated and the ileum entered on the right. In tracing down the ileum a Meckel's diverticulum was encountered which came from the mesenteric border and was attached to the umbilicus after penetrating the great omentum.

Acute inflammation of Meckel's diverticulum may so mimic symptoms of appendicitis that

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usually the operation is undertaken for the latter condition. Examination of the terminal ileum should be made if the appendix does not show sufficient pathology to account for the symptoms. A correct diagnosis in two of the last three cases reported by Wolfson and Clurman[21] was based on persistent and repeated colicky pains about one-half inch below the umbilicus, distention of the lower abdomen, high temperature and more than the usual appearance of toxicity in a child.

Treatment consists in removal of the diverticulum; in the smaller variety ligation, amputation and inversion, in those with the large lumen by excision and suture or by resection of the intestine. Ligation and inversion in the larger diverticula are dangerous.

True diverticula of the appendix are rare, but the acquired type were present in 1.89 per cent. of the cases of appendicitis operated on in the Presbyterian Hospital, New York, in one year, according to Stout[20]. They occur between the layers of the mesoappendix or near its mesenteric attachment and are frequently multiple, projecting from the appendix like buds, and may escape notice except on careful examination of the appendix. Diagnosis is made after removal, and what should be kept in mind is that in cutting through the meso close to the appendix an infected diverticulum may be opened and the operative field contaminated[14].

Traumatic diverticula are apparently due to weakness in the cecal wall which exists occasionally following appendicectomy[4]. Only two cases of primary solitary diverticula in which all coats were present have been reported[9].

In the colon, diverticula occur most frequently in males past middle age and are located in the sigmoid although they may be present in other parts of the colon. They are usually multiple and of the acquired type where the mucous membrane pouts through a weak point in the muscular coat. Frequently they contain small hard fecal masses. Acute inflammation may give rise to localized pain and tenderness with possibly a palpable mass, moderate distention and slight elevation of temperature which subsides under treatment. The inflammation, however, may be so extensive in a definite area that swelling and induration of the wall of the sigmoid result in a palpable tumor and a definite narrowing of the bowel which suggests malignancy. The lumen of the gut rarely shows ulceration and the obstruction is not likely to be complete. Abscess formation may result from the diverticulitis, and fistulae develop which rupture externally or into another hollow viscus[10].

Frequently diverticula exist without symptoms and are found only in the course of x-ray examination. The diagnosis is usually made by x-ray.

No radical treatment should be resorted to unless abscesses or obstruction develop. In the latter case a cecostomy followed later by excision of the obstructed area if necessary is better than a colostomy near the site of obstruction. Occasionally clinical symptoms disappear following colostomy[17]. The medical treatment consists of irrigations, administration of mineral oil and regulation of the bowels.

The following cases of diverticula of the intestinal tract are presented:

1923. Mrs. H—, aged 60. For two years she has had indigestion, gas and soreness in the right upper quadrant extending into the back. Two months previously there were pain and jaundice but no vomiting. Distention from gas was worse at night. Physical examination showed tenderness in the gallbladder region but no palpable mass. X-ray showed a poorly functioning gallbladder with no stones, and a duo-

FIGURE 1.

denal diverticulum in the region of the papilla, fan-shaped and about 1½ inches in diameter. Operation was advised but the patient refused and has continued with about the same symptoms.

1925. Mr. B—, aged 55. For ten years he has had epigastric pain radiating to the right side and suddenly relieved by soda. He belches gas for two or three hours at a time and occasionally vomits. He has vomited thin blood-tinged fluid in small amounts. Appetite is poor; there is no jaundice; the bowels are constipated. Physical examination showed marked pyorrhea, tenderness above and just to the right of the umbilicus, but no mass. X-ray of the gallbladder was negative, but there was a diverticulum about one inch in diameter on the second portion of the duodenum on the outer side. Operation was refused and the patient at present still suffers with indigestion.

1921. Mr. C—, aged 51. This patient was operated on one year ago for a ruptured gangrenous appendix. Nine days later he developed pain and tenderness in the gallbladder region with jaundice. The gallbladder was distinctly palpable and tender. Under treatment his inflammation subsided but his appendix wound drained for about three weeks.

About three months later his gallbladder, which was markedly tender and contained several large faceted stones, was removed and at that time a diverticulum was found in the second portion of his duodenum on the convex border. It was about one and a half cm. in diameter and one cm. high. The intestinal wall was thin at this point. It was apparently a diverticulum at the site of an ulcer. This was inverted by a pursestring suture of Pagenstecher. The patient made a satisfactory convalescence from his operation and has continued free from symptoms since that time.

1930. Mrs. D—, aged 29. This patient was operated on for an old laceration of the perineum with some prolapse. Her symptoms, aside from those of prolapse, were constipation, backache and loss of appetite. Laparotomy for suspension of her uterus

FIGURE 2.

and removal of her appendix was done and at that time a Meckel's diverticulum about three inches long and three-fourths of an inch in diameter was found located about two feet from the ileocecal junction. It had no mesentery. The appendix was nearly the same size. The appendix was removed and the stump buried. The diverticulum was excised and the intestine sutured with chromic gut, and the peritoneum with silk. A round ligament suspension was done. The patient has made an uninterrupted recovery, has gained weight, is relieved of constipation and backache and feels better than she has for years.

1925. Mrs. N—, aged 21. For three or four months she has had pain in the lower abdomen especially on the right side, and recently attacks of vomiting after being on her feet. She was entirely relieved when she stayed in bed. There has been no pain after eating, and no jaundice. There has been slight loss of weight. The bowels are constipated. Menstruation has been regular and normal until the last three months, since which time there has been considerable pain. She had a difficult labor three years ago. Physical examination showed tenderness in the right lower quadrant about two inches below the umbilicus and near the median line. The right kidney was freely movable and was felt at the level of the umbilicus. The cervix was irregularly lacerated; the fundus was anterior and slightly tender. There was an indefinite mass in the right fornix, which was tender. X-ray examination showed slight six-hour residue in the stomach and a retrocecal appendix. Laparotomy disclosed a retrocecal appendix and the right tube enlarged and thickened and buried in adhesions, with a cyst of the ovary about two inches in diameter. A diverticulum two inches long and nearly an inch in diameter was adherent to the posterior surface of the uterus, and at the end was an area about one cm. in diameter which had the appearance of a tubercle and was caseous. There was marked angulation of the ileum due to traction of the diverticulum. The diverticulum was located about two and a half feet from the cecum. There were no enlarged glands nor evidences of other tubercles. The appendix was removed and the stump inverted. The right tube and ovary were removed. About four inches of the intestine including the diverticulum were removed and the lumen reëstablished by end to end suture. The area on the uterus was excised and the peritoneum closed over it. The excised spot from the uterus showed giant cells. The patient made a satisfactory recovery and was discharged about three weeks after the operation. Her condition was satisfactory for about five years when she returned to her physician with symptoms of loss of weight, pain in the epigastrium about one to two hours after meals, and vomiting. X-ray at this time showed gastric ulcer. She has improved under medical treatment.

1927. Mrs. I—, aged 26. The patient entered the hospital complaining of severe abdominal pain in the lower part of the abdomen, worse at her menstrual periods, associated with nausea and backache. Menstruation occurred always about every two to three months. Physical examination showed a symmetrical abdomen, soft, not distended, markedly tender in the lower right quadrant especially near the median line. Pelvic examination was negative except for marked retroversion of the uterus. The diagnosis was retroversion of the uterus and recurrent appendicitis. A median line suprapubic incision showed a markedly retroverted uterus containing a small fibroid on the anterior wall. The appendix was about three inches long, kinked, and irregular in diameter. A conical shaped diverticulum was found about two feet from the cecum, located near the mesenteric border about one and one-half inches in diameter. It had no mesentery and the wall was thin. The fibroid was removed, the appendix was removed and the stump buried. The diverticulum was excised clamping it at its base. The intestine was sutured laterally with chromic gut and inverted with sutures of Pagenstecher. The uterus was suspended by the round ligaments. The patient's condition following operation was good and her pulse was 80. About six hours later the pulse had risen to 120 and was gradually increasing. About two hours later it had reached 140 and the patient was restless and showed signs of intestinal hemorrhage. The mucous membranes had lost some of their color. The patient had vomited several times during the afternoon. There was no especial complaint of pain and no evidence of fluid in the peritoneal cavity. A transfusion of 600 cc. of blood and 250 cc. of saline was given and the abdominal wound was reopened. The small intestine was dilated and filled with blood and there was a small amount of blood-tinged serum in the peritoneal cavity. It was evident that the bleeding came from a small vessel near the mesentery. Inverting sutures of Pagenstecher were introduced through coats of the intestine and the wound was closed. The temperature rose to 104° and the pulse to 150 following operation, but both gradually subsided and were normal on the fourth day after operation. The patient was discharged from the hospital on the twentieth day after operation. This case illustrates the necessity of careful suturing of the excised diverticulum.

1923. Mrs. R—, aged 59. This patient had had a dull ache in the left lower quadrant continuously for about one week. She was up and about, was nauseated, but did not vomit. The bowels moved daily. There was slight frequency of urination. When she was seen the abdomen was tender on the left side and a mass about the size of one's fist could be felt just below the level of the umbilicus, apparently extending upward from the pelvis. Rectal examination was negative. The temperature was 101°; the pulse 90. Her colon was irrigated and an ice-bag applied for three or four days with no relief of symptoms; the mass apparently was increasing. She

was operated upon about ten days from the onset of symptoms, an intraperitoneal abscess in the left lower quadrant, containing several ounces of thick greenish colon-smelling pus being found, with a cavity extending downward toward the sigmoid. This was incised and pus evacuated and tube and cigarette drains were inserted. The following day the patient had a brownish fecal discharge which continued for several weeks, but finally ceased. She was in the hospital about seven weeks. X-ray of the colon about four weeks after operation showed no diverticula and the patient has been perfectly well since operation. This was apparently a perforation of a small diverticulum which resulted in an abscess and was cured.

1926. Mrs. W—, aged 47. This patient had her gallbladder drained in 1919; her appendix had been removed previously. For two years she had had discomfort in the right side of the abdomen which had been worse during the past six months. She was nauseated about two hours after meals and occasionally vomited. The bowels moved with irrigation and at times the movements contained pus. Physical examination showed scars of previous operations in the gallbladder and appendix regions. There was marked tenderness at the lower end of the gallbladder incision, extending down to her appendix region. There was no palpable mass. X-ray showed no evidence of ulcer but possible diverticulum of the cecum and multiple diverticula of the colon. The scar in the gallbladder region was excised and the right side of the abdomen found to be entirely closed with dense adhesions. A mass of omentum about three-fourths of an inch in diameter extended downward and to the right, attached to the anterior surface of the cecum, resulting in a protrusion of the wall. This was released and the raw area was sutured. Adhesions along the colon were carefully dissected out and the wound was closed, nothing being done to the diverticula. The patient was rather uncomfortable for several days following operation and had a good deal of distention. This gradually cleared up and she has been relieved of her nausea and at present has no recurrence of her symptoms. She is taking mineral oil and occasional colonic irrigations.

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Discussion

Arthur W. Allen, M.D., Boston: All diverticula of the intestinal tract are of surgical importance, those of the duodenum and jejunum being quite rare and usually discovered accidentally through routine x-ray examinations. These cases respond very well to the same type of treatment that one would institute for duodenal ulcer, and unless a patient cannot be kept on such a régime for one cause or another, surgery is contraindicated.

Meckel's diverticulum, as Doctor Jameson has said, is more common than most of us realize. In fact, good authorities state that the instance is as high as two per cent., which makes it necessary to examine the distal portion of the ileum in every exploratory laparotomy for unexplained pain. The recent reports of typical peptic ulcer occurring in Meckel's diverticulum give all the more reason for searching for these lesions, and their eradication when found. Cobb (*Annals of Surgery*, August 1931) states that in the 37 such lesions reported, 21 had perforated.

By far the most common location in the gastro-intestinal tract for diverticula is, of course, in the large bowel. The proportion of the cases seen in the Massachusetts General Hospital in the past ten years runs as follows:

Duodenum	10	Jejunum	3
Cecum	4	Sigmoid	20

Of these, the diagnosis was made by x-ray, incidentally, in exactly two-thirds of the cases and they were not responsible for symptoms of sufficient severity to warrant operation.

Diverticulitis of the sigmoid is not an uncommon cause for emergency exploration. Due to the acuteness of the condition, the signs of obstruction, etc., operation is performed to rule out a lesion demanding immediate surgery. Rarely is the operation necessary if the diagnosis can be made without exploration. The mortality in drainage of diverticulitis is extremely high and if the surgeon can be convinced that the lesion is one of diverticulitis, the abdomen should be closed and the condition allowed to subside spontaneously. During this exploration it is very important not to handle the bowel too much for the same reason that one is careful of manipulation in cases of ulcerative colitis or carcinoma. Infection seeping through this region is easily transmitted to the peritoneal cavity, whereas, if left alone, it will remain localized.

Doctor Jameson brought out the point that if bowel drainage is necessary for obstruction in these cases, the drainage should be made on the right side rather than on the left side of the colon. I regard this warning as extremely important for the reason that if a future operation is necessary, the bowel having been drained through the left side makes further approach to this region not only hazardous but extremely difficult. In cases of obstruction in the left colon the exploration can frequently be made through the right abdomen and a cecostomy or a transverse colostomy done through this incision, and at this time adequate inspection and gentle palpation of the left-sided lesion carried out.

I wish to congratulate Doctor Jameson on his excellent presentation of the subject.

INTRAVENOUS HYPERTONIC GLUCOSE IN THE TREATMENT OF CARDIAC DISEASE— PRELIMINARY REPORT*

BY HOWARD B. SPRAGUE, M.D.,† AND PAUL D. CAMP, M.D.†

IN the treatment of disease there is a special appeal in therapy which seems to have a peculiar physiologic basis, as, for example, the substitution therapy of glandular extracts in thyroid and pituitary disease.

In a similar way the intravenous use of sugar solutions appears rational in diseases in which readily available food is urgently needed by active organs like the heart. For some years this procedure has been advocated in the regimen of certain cardiac patients. It is known, for example, that dextrose added to the perfusate of an isolated heart will make the heart beat again after it has stopped and will make a similarly prepared heart contract for a longer time than it will in a perfusate without sugar. Glucose when transformed to glycogen by a relatively simple change is a food which is utilized rapidly by the heart. It is, therefore, an easy step to the suggestion that glucose should be administered to patients suffering from fatigue or disease of the heart and especially of the conduction system.

In Germany there has been a wide use of intravenous sugar solutions and much has been written about it, as in the monograph by Büdingen describing several thousand injections. It has been advocated in the treatment of angina pectoris because of its vasodilating effect, as well as in other types of cardiac disease.

Our attention was recently drawn to this method through a report made at a staff meeting of the Massachusetts General Hospital on January 8, 1931, by Dr. H. M. Marvin of New Haven, who described his results in twenty-six cases. The indications for such treatment he believed to be (1) congestive heart failure not responding to other procedures, (2) diphtheritic myocarditis, (3) coronary thrombosis in which shock was the presenting factor, and (4) paroxysmal dyspnea. His experience, though limited, was felt by Marvin to show much encouragement for further trial of the method.

The technique favored by Marvin was the use of fifty to one hundred c.c. of 50% dextrose solution in ampoules as supplied by the Eli Lilly Company, which is marketed with a small additional ampoule in each box containing a buffer solution. The ampoules are warmed to body heat and drawn into a large syringe (100 c.c.). The solution is then injected into an antecubital vein, taking about six minutes to inject fifty c.c. Daily injections should be made for several days to a week or more, and the course repeated if necessary.

We have used this treatment for nineteen patients at the Massachusetts General Hospital or in private practice*. A control period of rest in bed and a trial of diuretics and digitalis was carried out in most cases. The urinary sugar was determined, when possible, at one and two hour intervals after the injection and in the total urine for the succeeding twenty-four hours. Serial electrocardiograms were taken on the hospital cases and the blood pressure was followed for one-half an hour after the injections.

The cases are summarized as follows:

(1) CONGESTIVE FAILURE

Twelve cases of severe congestive failure have received intravenous hypertonic glucose. Eight died during the period of observation, and the future of those who became ambulatory was very poor. Eight patients of this group had hypertensive or arteriosclerotic heart disease or a combination of these factors and four had rheumatic heart disease. Except for one child of three years of age and a man of twenty-six, the members of this group were all over forty years old and eight were over fifty. Four had auricular fibrillation, one auricular flutter alternating with fibrillation, and one left bundle branch block.

The improvement in these patients was only slight at best and in no case was a satisfactory diuresis produced. It should be noted, however, that four patients received less than five injections.

(2) DIPHTHERITIC MYOCARDITIS

We have not had an opportunity to try glucose on patients with diphtheritic myocarditis. Marvin's experience in this group was very striking. A personal communication from Dr. Edwin Place from the South Department of the Boston City Hospital states, however, that: "Every case of severe diphtheritic myocarditis has been treated with hypertonic glucose intravenously since Marvin's report. This includes only six cases of the severe type. Electrocardiographic records were taken immediately before and after the injections which were given with the electrodes left in place in some of these.

"We have not been able to demonstrate any immediate or late effect of the injections on the

*From the Cardiac Laboratory, Massachusetts General Hospital, Boston.

†Sprague—Visiting Physician and Research Director, House of the Good Samaritan. Camp—Cardiac Resident and Dalton Scholar, Massachusetts General Hospital 1930-1931. For records and addresses of authors see "This Week's Issue," page 300.

*For data on five cases we are indebted to Dr. Paul D. White and Dr. Robert S. Palmer.

cardiac mechanism, but as the heart shows rapid changes during diphtheria, it is difficult to say as to the latter.

"No patient with heart block in this group has survived and we cannot say from past experience that the end result has been modified. It is clear, however, that the comfort of the patient is materially enhanced and several patients have felt very comfortable up to the time of death."

(3) CORONARY THROMBOSIS*

Three cases of coronary thrombosis have been given hypertonic glucose. (One other recent patient received a single injection which failed to tide him over the acute stage of shock.) Two of these patients died. One of them received a single dose of fifty c.c. during the acute period of collapse but did not survive. The other one was given only two injections and the clinical impression was that there was a definite improvement after the injections. He lived for twelve days after the occlusion and died suddenly, when apparently improving, from a probable rupture of the ventricle.

The patient who lived was suffering from a subacute coronary occlusion with angina decubitus. She received one injection of one hundred c.c. of an imperfectly prepared solution, causing a reaction which appeared as abdominal pain, dyspnea and headache. One injection of the Lilly product caused no reaction, but because of the nervousness of the patient and the poor veins the treatment was stopped. For ten days one hundred grams of glucose a day were given by mouth without any change in her condition.

(4) PAROXYSMAL DYSPNEA (CARDIAC ASTHMA)

Four cases have been classified in the group of paroxysmal dyspnea. It is in these cases that the use of glucose appeared most hopeful.

CASE 1. A seventy-three-year-old doctor with arteriosclerotic heart disease, auricular fibrillation and Cheyne-Stokes respiration was admitted to the Baker Memorial Hospital. The patient was incontinent and practically moribund on admission. He received seventy c.c. of 50% glucose intravenously and the next morning was alert and able to talk and appeared much better. Succeeding injections improved his general condition but produced no great change over that of the first injection and he died a short time later.

CASE 2. A man of fifty-four with marked hypertension, gallop rhythm, angina pectoris and paroxysmal dyspnea was given four injections of 50 c.c. and one of 100 c.c. His angina decubitus and dyspnea were much relieved but he died of congestive failure about six weeks after stopping the treatment, while on a trial of glucose by mouth. Observations on blood pressure before and after injection showed no change. On one occasion premature beats arose following the treatment.

CASE 3. A man of sixty-three with hypertension and arteriosclerosis, and left bundle branch block by electrocardiogram, received fourteen injections of 100 c.c. each except for an initial dose of 30 c.c. Attacks of cardiac asthma which were coming frequently entirely disappeared and he was able to leave the hospital much relieved.

CASE 4. A woman of sixty-eight with hypertension and arteriosclerosis and left bundle branch block reëntered the Massachusetts General Hospital with severe attacks of dyspnea occurring every night and requiring morphia. She received nineteen doses of 50% glucose, all but four consisting of 100 c.c. each. After the second injection the paroxysms of dyspnea stopped and while under observation she slept without morphine.

DISCUSSION

While this small series of cases cannot furnish conclusive evidence of the value of intravenous glucose in cardiac disease we have felt that it has warranted this report because of the interest recently aroused by the method and because it has served to answer certain theoretical arguments which have been adduced against the therapy. These objections are chiefly the following:

(1) Hypertonic glucose is irritating to the veins and has been used to produce sclerosis of varicose veins.

In one patient, a man treated outside of the hospital, venous thrombosis in one arm was produced. The solution, if injected into the tissues, is intensely irritating and the injection into a vein in a few other cases produced a temporary feeling of warmth up the arm. Careful technique should prevent thrombosis of veins except in rare cases.

(2) The hypertonicity of the solution produces an hydremic plethora which by increasing the blood volume may disturb the circulatory balance.

This disadvantage has weighed heavily enough with us so that our original injections have been usually only 50 c.c. We have not observed pulmonary edema or similar phenomena following the injections of the purified solution in this amount.

(3) Solutions of glucose produce symptoms of shock.

While it is true that we have seen impure or imperfectly buffered solutions cause undesirable reactions these have not occurred with the Lilly product nor have we reason to believe that they would occur with any standard buffered solution from ampoules.

(4) Glucose, being a threshold substance, should be rapidly excreted by the kidney, resulting in a diuresis, but at the same time in a considerable loss of the sugar in the urine.

*One other patient with severe coronary thrombosis was treated by one of us (H. B. S.) while this paper was in press, with daily injections of 50 c.c. of 50% glucose. This patient was suffering from marked fall in blood pressure with auricular fibrillation and acute mania followed by unconsciousness with Cheyne-Stokes breathing. He was unable to take any food or fluids by mouth. Recovery occurred after 12 intravenous injections in 7 days.

In our series, in the ten cases in which the urine was tested, transient traces of sugar appeared in the urine in six and one case showed 2% one hour after injection.

(5) Glucose by mouth should be just as effective since it is easily absorbed from the gastrointestinal tract.

As a matter of fact it is very difficult to get cardiac patients to take a diet which is so sweet, and the absorption from the intestine is often very poor, especially in congestive failure. The result is not so good as it is when the sugar is given intravenously. This also suggests that the factor of direct introduction of a hypertonic solution into the circulation is significant.

We have found no change of importance in the blood pressure. It has increased or decreased slightly or remained unchanged in serial observations for several minutes after injections.

The electrocardiogram has in one case showed marked increase in voltage during the treatment. We have seen no decrease in the degree of intraventricular block.

Our experience, therefore, parallels that of Marvin in showing the safety of the procedure. Marvin stated that he had personally known of 500 to 600 such injections without any unfavorable reaction and with only one venous thrombosis.

It should be remembered that the use of intravenous hypertonic glucose is recommended for patients who are critically ill and in whom the prognosis is almost hopeless. Even if this treatment offers aid to only a few in the alleviation of symptoms or in support during difficult moments, it should, nevertheless, be given a trial.

SUMMARY

A preliminary report is made of the use of intravenous hypertonic dextrose solutions in the treatment of nineteen cases of cardiac disease. Certain theoretical objections to the method have been discussed. We feel that the therapy is worthy of trial in cases of paroxysmal dyspnea (cardiac asthma) because of some success which we have had in four cases. It should also be considered in cases of coronary thrombosis with shock, congestive failure not responding to other treatment, and diphtheritic myocarditis, although our experience so far has not shown either marked or permanent benefit in such cases. Reports in the literature suggest that repeated small injections (10-20 c.c.) of hypertonic glucose may help patients with increasing angina pectoris.

PIONEER INSTITUTION OF POST-GRADUATE MEDICAL STUDY CELEBRATES HALF-CENTURY OF PUBLIC SERVICE

(Continued from Page 283)

coöperation of the Faculty in carrying it to fruition.

Dr. Chace, in assuming the honor, paid high tribute to the founders of the institution. "Tonight we are enjoying the fruits of the tree which was planted with courage, vision, and enthusiasm fifty years ago by a group of far-seeing, public-spirited men. In celebrating this fiftieth anniversary of the founding of the New York Post-Graduate Medical School, we should be unworthy inheritors of a great ideal if we did not explicitly recognize that the highest honor of all is due to those who created."

The speakers of the evening were Dr. George H. Meeker, Dean of the Graduate School of Medicine, University of Pennsylvania; Dr. Nicholas Murray Butler, President of Columbia University; and Dr. Ray Lyman Wilbur, U. S. Secretary of the Interior.

STATE MEDICINE THREATENS AMERICA

As spokesman for one of the oldest universities in this country, and one which actually has incorporated into its organization a separate school for the advanced study of the graduate physician, Dr. George H. Meeker's brief consideration of such matters as state medicine, cost of medical care, and the certification of specialists, carried considerable weight. He warned the profession that unless the problem of the high cost of medical care was solved, for both patient and physician, state medicine would inevitably be necessitated in America, as in most of the world's great nations. Medical education must become so organized that it shall efficiently utilize modern scientific facilities at a cost within the reach of the people. Under the present system, high-grade medical care is available only to the rich and to the properly hospitalized poor.

"State medicine would be an unfortunate extension of social practices—alike for patients and physicians," urged Dr. Meeker. "To the patient it would mean impersonal, perfunctory medical services. To the physician it would bring a type of governmentally dictated servitude to replace his dignity of independent service. Therefore organized physicians should go forth mightily to meet and to destroy this threat ere it becomes an established fact."

The substance of the address of Dr. Nicholas Murray Butler, President of Columbia University, was the future outlook.

ACUTE PNEUMOTHORAX

Report of a Case In An Infant of Seven Months

BY HENRY W. HUDSON, JR., M.D.*

ACUTE pyopneumothorax in infancy occasionally accompanies empyema before any diagnostic or therapeutic instrumentation has been done, and is best explained as due to the spontaneous intrapleural rupture of a lung abscess. Johnson[1] reports ten cases, five in infants under eleven months. Rogatz and Rosenberg[2] report a case in an infant of nine weeks and, in a search of the literature, they find only eleven additional cases (including those of Johnson) of pyopneumothorax due to infection during the first year of life. In these cases considerable exudate was present, a positive culture was obtained in most instances, and only one patient recovered.

The case now reported is of interest because of the rarity of the condition, the dramatic onset, the minimal exudate and indefinite bacteriologic determinations, and because it is the second reported recovery.

CASE REPORT

A. M., a white female of seven and one half months was admitted to the Private Ward of the Children's Hospital on March 14, 1931, because of increasingly severe respiratory distress.

Family History: Mother and father living and well. No siblings.

Past History: Full term, normal infant who has been well until the present illness. Maximum weight was nineteen pounds at seven months.

Present Illness: Early in February, 1931, the infant appeared to have an upper respiratory infection with nasal discharge, cough and slight fever. This persisted for about one month during which time a local physician is said to have reported a mild bronchitis. She was not very ill but was thought to have lost some weight. On March 2, 1931, she was seen in consultation by Dr. Henry E. Gallup who found evidence of pneumonia over the right lower lung. His examination was confirmed by an x-ray. Between March 2 and March 12, 1931, slight fever and cough continued but the infant was not thought to be very ill. On March 12, 1931, there was a transient widespread urticaria.

At 7:20 P. M., March 13, 1931, the infant suddenly cried out as if in acute pain and developed increasing respiratory distress with rapid, grunting respirations. These symptoms increased during the night and on admission to the Hospital the respirations varied between seventy and eighty per minute.

Physical Examination on admission revealed a well-developed and excellently nourished infant in great distress. Her expression was anxious and there was slight cyanosis and movement of the alae nasi. The heart and mediastinum were displaced to the left and the liver displaced downward so that its inferior border was palpable just above the pelvis. The right side of the chest appeared full and respiratory movements were limited as compared with the left. On percussion there was a high-pitched, hyperresonant note over the entire right chest. Breath sounds were audible but suppressed and no râles were heard. Temperature 99.6°. Pulse 160. Respirations 78.

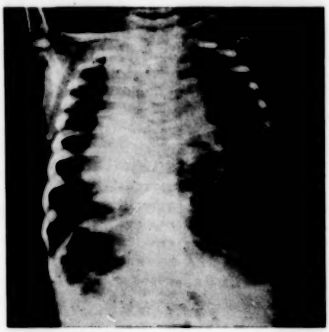

ILLUSTRATION NO. 1. X-ray on admission. Note deviation of trachea, displacement of heart and mediastinal shadows, downward displacement of liver, and loculated pneumothorax with partial collapse of lung. The loculated pneumothorax was thought to resemble gas-filled intestine sufficiently to make it necessary to exclude diaphragmatic hernia.

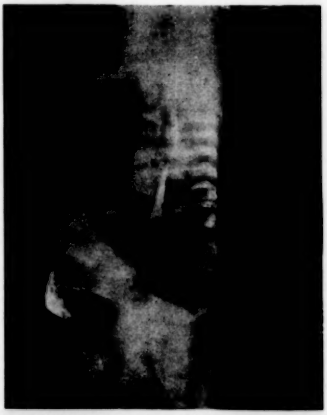

ILLUSTRATION NO. 2. Lateral view after administration of barium which may be seen in esophagus and stomach. Note large air-containing space in anterior portion of chest and one or more air-containing spaces in the postero-inferior portion.

Laboratory Data: Red blood cells 4,350,000. Hemoglobin 60% (T). White blood cells 31,800 with 77% polymorphonuclear cells. Urine negative.

X-ray (see Illustration No. 1) revealed an apparently loculated pneumothorax on the right with partial

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collapse of the lung, displacement of heart, mediastinum, and liver, and no evident fluid.

Following the administration of barium, diaphragmatic hernia was excluded (Illustration No. 2).

Course: On the day of admission, thoracentesis by Dr. Gallup was productive of air under pressure and gave no relief. Consultation was held that evening and a catheter was introduced through the ninth interspace in the mid-scapular line. A large amount of air, under pressure, escaped with immediate improvement in the infant's condition. Only a few c.c. of thin, yellow fluid was obtained. The catheter was left in place for water-seal drainage and, during the night, air continued to escape in large amounts.

At seven the following morning the catheter had become dislodged and within two hours the respiratory distress recurred. The catheter was re-inserted, again with relief but less so than at the first introduction. The infant passed a fair day but during the night distress increased, cyanosis became marked, the head was retracted, the accessory muscles of respiration were very active, and the respiratory rate exceeded eighty per minute. Air continued to escape from the water-sealed intercostal catheter. Aspiration in the third interspace in the nipple line was productive of air under great pressure; so great that its escape through the needle was audible at a distance of more than ten feet. There was no relief and as the pulse rate increased and cyanosis deepened, death seemed imminent. Accordingly, a rapid subperiosteal rib resection was performed under novocain infiltration. As anticipated, the two air-containing spaces seen in Illustration 2 did not communicate because of pleural adhesions. These adhesions were hurriedly divided converting the loculated air spaces into one. The wound was kept open by means of an empyema button and the infant returned to bed.

Relief was apparent at once and although the pulse and respiratory rate remained accelerated for some time (see Illustration No. 3), convalescence was rapid. For twelve days it was apparent that the pleurobronchial fistulae were patent as, on auscul-

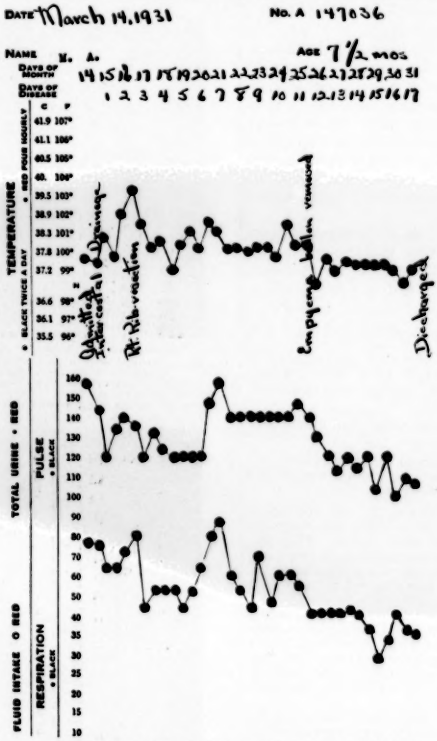

ILLUSTRATION NO. 3. Clinical chart showing effect of thoracotomy on respiratory rate. The rise on March 21 was coincident with the temporary occlusion of the thoracotomy wound. The infant's respiratory distress was then more markedly relieved than the chart indicates.

tation, air could be heard to enter the pleural space by way of the bronchial tree, and this was accompanied by a clicking sound suggestive of a pleural valve formation.

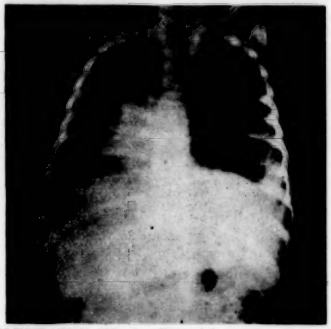

ILLUSTRATION NO. 4. Eleven days after thoracotomy. Only a small pneumothorax remains, the lung is expanding, and the displacement of liver, mediastinum and heart is largely corrected. There is very little parenchymal infiltration. The site of rib resection is visible.

At no time was there any purulent discharge other than that incidental to any granulating wound. Of three cultures, two were sterile and one showed staphylococcus aureus. The empyema button was removed nine days after operation and the infant discharged home on the fifteenth postoperative day in good condition and with an almost completely healed wound. The lung was largely reëxpanded (see Illustration No. 4).

The wound healed permanently ten days after the return home.

The infant has been observed carefully for seven months and is now considered perfectly well. At fourteen months she is walking and weighs 25 pounds.

COMMENT

The mechanism of development of this tension pneumothorax was probably the intrapleural rupture of a lung abscess following a prolonged, low-grade, pulmonary infection. Evidently there was more than one pleurobronchial fistula and air under pressure accumulated in loculi formed by pleuropleural adhesions. Once the loculi were converted into one space which communicated with the body surface, the tension was relieved and respiratory embarrassment ceased. The fistulae closed spontaneously as the wound healed; their usual behavior, if not over-treated.

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1 Johnson, F. E.: Pyopneumothorax in infants. Am. J. Dis. Child. 33: 740, 1927.
2 Rogatz, J. L., and Rosenberg, A.: Acute pyopneumothorax. Am. J. Dis. Child. 41: 1104, 1931.

THE PRESENTATION OF A PORTRAIT OF HIMSELF TO DR. LAFAYETTE B. MENDEL

On the occasion of his sixtieth birthday anniversary, Dr. Lafayette B. Mendel, professor of physiological chemistry at Yale University, was presented on February 5 with a portrait of himself by John Quincy Adams, the noted Viennese artist. Over four hundred students and associates participated in making the gift in recognition of Professor Mendel's long and distinguished service as a teacher and as a leader in his field of science.

Born in Delhi, New York, in 1872, Professor Mendel obtained his B.A. degree at Yale University in 1891. He began his services at Yale as a teacher of physiological chemistry in the following year. Except for periods of study at Breslau and Freiburg, Professor Mendel has thus been at Yale University continuously for forty years. Since 1921 he has been Sterling Professor of Physiological Chemistry and he is a member of the governing boards of the School of Medicine, Sheffield Scientific School, and the Graduate School of Yale University.

Dr. Mendel was a pioneer in this country in the study of nutrition and is today among the greatest authorities in this field. He is best known for his analysis of the value of food constituents, as shown by their influence upon growth. His contributions have been made not only through research and publications but through the influence he has had upon scores of men and women, many of them distinguished scientists, who obtained their training under him. Much of Dr. Mendel's work with proteins, vitamins, and other nutritional factors was carried out in coöperation with Thomas Burr Osborne (1859-1929), the great authority on the chemistry of vegetable proteins.

Many honors have been bestowed upon Dr. Mendel. The degree of Ph.D. was conferred upon him by Yale University in 1893, and the honorary degree of Sc.D. by the University of Michigan in 1913. In 1927 he was the Gold Medalist of the American Institute of Chemists. Dr. Mendel is a member of many national scientific and educational societies, in this and other countries.

CASE RECORDS
of the
MASSACHUSETTS GENERAL HOSPITAL

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN WEEKLY CLINICAL-PATHOLOGIC EXERCISES

EDITED BY RICHARD C. CABOT, M.D.
P. M. PAINTER, A.B., ASSISTANT EDITOR

CASE 18061

A PROBLEM AS TO TRANSFUSION AND AS TO EXPLORATION

MEDICAL DEPARTMENT

PRESENTATION OF CASE

DR. DAVID W. WALLWORK*: This is the case of a sixty-three year old white native married draftsman who entered complaining chiefly of weakness and dizziness even when he was lying perfectly quiet in bed.

He was obviously too ill to question very carefully, but he repeatedly denied having any gastro-intestinal or abdominal symptoms before the present illness. He was not an alcoholic. He denied venereal disease. In fact, he denied any previous serious illnesses.

About forty-eight hours before he entered, while at work and walking about, he suddenly felt weak and faint and vomited a considerable quantity of bright red blood. He was taken home and put to bed, where he was fairly comfortable except for weakness, dizziness and mild diarrhea with tarry black movements. About the middle of the day of admission he began to feel considerably weaker and faint and asked to be sent to the hospital.

On entry he was pale and waxen, obviously on the verge of air hunger though he did not actually have it. He was very weak. The slightest movement in bed made him dizzy and faint. The blood pressure was 80/60. The pulse was only 104, of fair quality. He complained of no pain. Examination of the abdomen was negative, but as the patient voluntarily held his abdomen quite tense at the slightest touch, examination was difficult.

The red blood count was 1,500,000, the hemoglobin 35 per cent. His Wassermann was negative. Nothing of note was ever found in his urine.

The diagnosis seemed to be bleeding gastric or pyloric ulcer; therefore he was put on the usual régime of flat in bed with nothing by mouth, morphia one-eighth grain subcutaneously every three hours unless the respirations went below fourteen, and bidaily hypodermoclyses. His condition throughout the night and most of the next day seemed stationary. At six p. m. the second day he vomited two ounces of dark blood, but his blood pressure and pulse remained constant, the blood pressure at about 100/60 and the pulse at 80, both somewhat better than at entry. His red cell count however went down on the second day from 1,500,000 to 1,150,000, and the hemoglobin was 30 instead of 35 per cent. In spite of this it seemed that he probably had stopped bleeding. Transfusion seemed almost imperative because of his weakness and imminent air hunger. Accordingly he was given about 500 cubic centimeters of blood by the Vincent tube method. This made little change in his color, general condition or subjective feelings. He was seen at this time by a medical consultant, who thought that he would stop bleeding in time and was in good enough condition for another smaller transfusion. Accordingly on the third day he was given 250 cubic centimeters of blood, again by the Vincent tube method. On this day his stools showed a very strongly positive guaiac. He seemed to be holding his own however, and even to be improving slightly. He was brighter, took more interest in things and was not quite so weak or dizzy. His pulse was fair and slow. His blood pressure was 110/60, the highest it had been since he was admitted. Five days after entry it was thought safe to give him an ounce of water by mouth every hour and a little ice cream, which he asked for specifically.

That night he became irrational and seemed to get steadily more disoriented. It was agreed that the condition was probably cerebral anemia in an obvious arteriosclerotic. Further transfusion was advised. His wife however refused. This made operative intervention impossible even though it was thought to offer the patient the only chance of recovery. His condition became steadily worse. His blood pressure and pulse fell steadily until the day of death, the blood pressure going down until it could not be obtained. The pulse was never over 100 at any time in the hospital except at admission. He had some terminal fever. On the eighth day he died.

DR. ARLIE V. BOCK: How high was the white cell count?

DR. WALLWORK: It was 10,000 on entry; it was not repeated.

DR. BOCK: That is a very unusual white count for a patient having severe hemorrhage.

DR. WALLWORK: There was an unusual pulse reaction too. I do not know why the white cell count was not repeated.

DR. TRACY B. MALLORY: Dr. Miller unfortunately could not get in to discuss this case.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Bleeding peptic ulcer?

*Second junior interne on the East Surgical service.

ANATOMIC DIAGNOSES

Ulcers of the stomach with hemorrhage from one of them.
Central necrosis of the liver.

PATHOLOGIC DISCUSSION

DR. TRACY B. MALLORY: The gross findings at autopsy were of interest. They were limited to the stomach, where we found two ulcers, one directly on the lesser curvature 10 centimeters from the pylorus and one a little to one side of the curvature on the anterior wall about 12 centimeters from the pylorus. The first ulcer was deeper than the second, but the second, a shallow acute ulcer, contained in its base an artery 3 millimeters in diameter. From this the bleeding had occurred. In the neighborhood were two fibrous scars of old ulcers. The stomach itself was free from any large amount of blood, but the duodenum was filled with it, and some portions of the intestinal tract.

When we came to look over the microscopic sections we found one other thing of interest that is hard to correlate with these findings. That was a very extensive central necrosis of the liver. Approximately two-thirds of every liver lobule was acutely necrotic. The remnants of the liver cells were being invaded by polynuclears. There was no evidence of any capillary thrombi. I do not believe we can connect it with his transfusions. I think it was probably a toxic reaction to some terminal infection the nature of which was not discovered.

DR. WILLIAM BRADFORD ROBBINS: When I saw that case in consultation we could get no history that suggested any trouble previous to that time. So far as any liver disease went he had shown no evidence of it before. He had a very severe hemorrhage evidently and it seemed to me that nothing but a small transfusion was justifiable after several days of clyses. We thought that perhaps there would be no reaction with small transfusions, and we did them on two successive days. He seemed to be getting distinctly better for a while, although the interesting thing clinically was the enormous amount of peristalsis. His bowel was very active all the time he was in the hospital.

We talked over the question whether or not we ought to operate. It seemed that we should gain very little, that we probably should not find anything if we did go in. Later as the condition quieted down there was a question as to whether anything could be done. The wife refused to have any operation done, so that our hands were tied.

DR. WALLWORK: He also showed a peculiar reaction to morphia. Even one-eighth of a grain would make the respirations go down. Still I think he had more than one-eighth of a grain of morphia once or twice.

DR. MALLORY: There is one point to be considered. The artery showed general definite arteriosclerotic change. In young people the usual effect of cutting an artery is a reflex contraction. That in itself probably tends to cut down bleeding until thrombosis can occur. In an artery as definitely sclerotic as this, contraction might be absolutely impossible.

DR. BOCK: Isn't it the prevalent impression among surgeons that if a patient is transfused at this stage hemorrhage may be induced? How much background has that view in actual experience? I should think the danger of producing increased hemorrhage by putting blood into the circulation was offset by the better clotting reaction of the blood, which is improved by the addition of new whole blood.

[*Note by* DR. RICHARD H. MILLER: It is very true that a transfusion given during the course of or just after bleeding from a peptic ulcer may raise the blood pressure enough to cause further bleeding, and in this way the transfusion defeats its own purpose. On the other hand it may improve the clotting reaction and in this way may prove to be of value. In a patient who is obviously failing from this type of hemorrhage I should advise one or perhaps two transfusions and then if the hemorrhage persisted would resort to exploration, having one donor, or preferably two, on hand. I would transfuse before exploration and then if necessary afterward. In this case I strongly urged this procedure, but the patient's wife refused to allow it. Having seen the postmortem examination I believe there is a reasonable chance that his life might have been saved.]

DR. MALLORY: Dr. Vincent, how do you feel about operating on these cases of bleeding ulcer?

DR. BETH VINCENT: In ulcer cases with massive hemorrhage we are usually dealing with a chronic ulcer at the base of which there is, as in this patient, an eroded open artery. Such bleeding is apt to recur in spite of rest and transfusion. For this reason I believe that early operation after transfusion is the best treatment for these cases. We must recognize, however, that to control such bleeding requires a major surgical operation,—resection of a portion of the stomach for gastric ulcer or division of the stomach above the pylorus, mobilization of the duodenum and posterior exposure of the ulcer for ulcers that have eroded the gastroduodenal or pancreatoduodenal artery. In my experience attempts to control bleeding from these vessels through an incision into the duodenum have not been successful.

DR. HOWARD B. SPRAGUE: I think there is one other factor in some cases and that is the dangerous effect of the low blood pressure in older patients on narrowed sclerotic vessels in various parts of the body, such as the brain and heart. That is especially true in relation to coronary occlusion. I remember one case very well in

which a fall in blood pressure from a bleeding ulcer produced fatal coronary thrombosis in a man who had preëxisting angina. Such a secondary effect is another reason for advising small transfusions to keep up the blood pressure in these cases.

CASE 18062

ABDOMINAL ENLARGEMENT WITH UNUSUAL PHYSICAL FINDINGS

PRESENTATION OF CASE

DR. GREENE FITZHUGH: This patient was a seventy-five year old single woman who was seen in the Diagnostic Clinic.

She came in thinking that her abdomen had enlarged very slightly. She wore corsets, and noticed that they were tighter than they had been a month ago. There was no loss of weight. She did tire more easily than she had done until a month previously. She worked until the day before she came to the clinic. She had had no nausea or vomiting. There was nothing really important except a feeling of pressure over the symphysis pubis, with no pain.

The pupils, nose, ears, neck and thyroid were all negative on physical examination. We found that the apex impulse of the heart was in the third left interspace. That was all there was unusual about the heart; but that together with the fact that the abdomen was a little tense made us think that whatever was in the abdomen was pushing the heart up. There was a small area in the left breast which we thought was probably chronic cystic mastitis. There were no glands to be felt, and there was no adherence to underlying tissue. The abdomen showed flatness all over except on the right, where we could get slight tympany all the way down to the flank. With shifting position this was still present. The abdomen stayed flat on the left side when we laid her over on her right side. We thought that there was encapsulated fluid in the abdomen and on account of her age, probably a malignant ovarian tumor. The uterus was pushed down in the pelvis and on rectal examination there was a nodular mass the size of a plum which we thought was metastasis.

Dr. Linton saw her and thought that we should consider carcinoma of the stomach with metastases. We were going to have a gastrointestinal series done. The day before she was to have had it she had sudden severe pain over the entire abdomen, went into a state of collapse and died.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Metastatic carcinoma, primary in the stomach? in the ovaries?

ANATOMIC DIAGNOSES

Carcinoma of the stomach with perforation.
Metastases in the peritoneum.
Acute peritonitis.
Bilateral hydrothorax.
Compression atelectasis of the lungs.
Chronic cholecystitis.
Cholelithiasis.
Arteriosclerosis.
Multiple fibroids of the uterus.

PATHOLOGIC DISCUSSION

DR. TRACY B. MALLORY: This patient's own physician was very much interested in her and asked if we could send someone to do an autopsy at her home. This was done.

We found that she had, as was expected, a generalized malignancy. The primary focus was in the stomach. It was an oval ulcerated mass protruding from the anterior wall, with raised edges and a markedly depressed center. In the very center there was perforation, undoubtedly the terminal acute event which was the immediate cause of death. In gross it was a little difficult to be certain whether or not it was neoplastic. We thought on macroscopic examination that it was possibly carcinoma. The microscopic sections confirmed that diagnosis, all layers of the gastric wall showing a large number of small signet ring cells. The peritoneal cavity showed a large amount of fluid with fresh fibrin. She was rapidly developing peritonitis during the last few hours. The surface of the peritoneum was studded with small neoplastic lesions.

DR. WYMAN RICHARDSON: I saw this patient with Dr. Fitzhugh. I was practically certain that the fluid in the abdomen was encysted, because of the tympany in the flanks. It did not occur to me to suspect the possibility of a gastric lesion. However, Dr. Linton had that idea. I wonder why he did.

DR. ROBERT R. LINTON: My first impression when I saw her was that she had an ovarian tumor. She had a large distended abdomen and tympany in the right flank. I have been taught to understand that tympany in the flank is a pretty sure sign of ovarian cyst rather than of ascites. However, by pelvic examination ballottement showed no masses that could be ascertained between the abdominal wall and the uterus, indicating that the fluid was not encysted, but was probably due to ascites. She also gave in her history a story of anorexia for the past three or four months, not very marked but quite definite. Also on pelvic examination, behind the uterus and in close conjunction with the cervix were several very hard nodules which felt like metastatic nodules. I could not feel the ovaries, so it seemed to me the most likely diagnosis was carcinoma of the stomach with metastases.

I certainly am surprised that the primary growth in the stomach is not any larger in the presence of pelvic metastases.

DR. RICHARDSON: Didn't she have a good many lesions of secondary importance?

DR. MALLORY: Yes. She had bilateral hydrothorax and compression atelectasis of both lungs, chronic cholecystitis, cholelithiasis, marked arteriosclerosis and a few rather small fibroids in the uterus. The breast lesion was a definite chronic mastitis; there was no suggestion of malignancy there.

DR. FITZHUGH: Was it a fairly large hydrothorax?

DR. MALLORY: Not very.

DR. GEORGE W. HOLMES: Was the cancer a prepyloric lesion?

DR. MALLORY: It was 4 centimeters from the pylorus.

DR. BETH VINCENT: Are those peritoneal metastases?

DR. MALLORY: Yes.

DR. EDWARD B. BENEDICT: Isn't that quite a small lesion for such extensive metastases?

DR. MALLORY: Yes, but again it is not very rare to see as extensive metastases as those with a very small primary lesion.

DR. FITZHUGH: Were there any adhesions in the abdomen to account for the tympany far down there in the flank?

DR. MALLORY: I think not. Our findings were complicated by the fact of the perforation and the final peritonitis.

DR. PAUL W. HUGENBERGER: The abdomen contained a large amount of gas and about 12 quarts of fluid. The omentum was matted together, forming a hard thick carcinomatous band across the abdomen just below the greater curvature of the stomach. The parietal peritoneal surfaces showed numerous very small metastases. There was not very much in the way of metastasis in the pelvis however. There was a small fibroid about 2 centimeters in diameter on the posterior wall of the fundus of the uterus. Both ovaries were small and atrophic. The pelvis was filled with fluid and the surfaces covered with fibrin, and probably some thin small plaques of carcinoma, but when I did the autopsy I did not think that those could have been felt clinically.

DR. FITZHUGH: I thought the nodule was about two-thirds of the way up the vaginal wall on the posterior side. Do you remember, Dr. Linton?

DR. LINTON: It seemed to me that it was the posterior cul-de-sac. My impression was that it was nodular and infiltrating in character. It was quite distinctly not a globular thing like a fibroid.

DR. MALLORY: The gas of course must have been a terminal event due to the stomach perforation. It was not present at the time she was examined in the hospital.

DR. LINTON: Would you call that type of lesion a Krukenberg tumor?

DR. MALLORY: Krukenberg tumor arises as a colloid carcinoma of the stomach, which this woman had; but the term is not ordinarily used until the ovaries are involved.

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WHAT IS CHIROPRACTIC?

IT is difficult to get a clear idea of the nature of chiropractic from definition by its advocates because there is no general agreement on their part, but several quotations from state laws may be cited to indicate what chiropractic purports to be.

In Oregon, "Chiropractic is defined as that system of adjusting the articulations of the bony framework of the human body especially asymmetries of the vertebrae, for the purpose of removing the cause of disease by the correction of subluxations, thereby removing pressure, impingement or tension from the nerves having their passage between, through or around the structures subluxated. The subluxation is corrected with the hands, using the bones of the body, more particularly the spinous and transverse processes of the vertebrae, as levers to which is applied a peculiar adjustic (sic) movement—the chiropractic thrust." Laws of 1915, Ch. 325.

In Montana, "Chiropractic is the science that teaches that disease results from anatomic disrelation, and teaches the art of restoring anatomic relation by a process of adjusting by the use of the hand. No other means of securing health shall be construed to be chiropractic except the application of the inherent qualities at the time in the patient or appertaining to the chiropractor." Laws of 1919, Ch. 225.

In New Jersey, "The term chiropractic when used in this act shall be construed to mean and be the name given to the study and application of a universal philosophy of biology, theology, theosophy, health, disease, death, the science of the cause of disease and the art of permitting the restoration of the triune relationships between all attributes necessary to normal composite forms, to harmonious quantities and qualities by placing in juxtaposition the abnormal concrete positions of definite mechanical portions with each other by hand, thus correcting all subluxations of the articulations of the spinal column, for the purpose of permitting the recreation of all normal cyclic currents through nerves that were formerly not permitted to be transmitted, through impingement but have now assumed their normal size and capacity for conduction as they emanate through intervertebral foramina—the expression of which were formerly excessive or partially lacking—named disease." Laws of 1920, Ch. 4. Apparently it was felt that this definition failed to do justice to the science and art for the law was repealed in 1921.

For the common-sense definition, one turns to the dictionary and finds that chiropractic is described as a "drugless method of treating diseases chiefly by manipulation of the spinal column".

Is chiropractic a part of the practice of medicine? Much confusion has arisen because the term "medicine" has ordinarily at least three meanings and quibbling has resulted when the practice of medicine is under discussion. Ordinarily when the term "practice of medicine" is used in the medical practice act of any state, or in general discussion, we refer to the profession of medicine as distinguished from other professions. The practice of medicine in the common-sense meaning of the term refers to any and all methods of treating persons who are sick for the purpose of alleviation or cure of the disease. According to this widespread conception, chiropractic is part of the practice of medicine, and the chiropractor is practising medicine. This is true no matter what disingenuous or sophistic arguments or wordings of the law may be devised by chiropractors. Decisions of some state courts are specific on this point and a decision by the Supreme Court of the United States supports this opinion in principle, specifically referring to osteopathy. Accepting the

view of common sense and of the courts that chiropractic is a part of medicine: What shall the State do about it? What shall the medical profession do about it? What shall the chiropractors do about it?

The answer by the State should be: Here is a system of treating disease, the exact merit of which the State may not be in a position to determine, but concerning which the State is not willing to say that it can and should make unnecessary and superfluous all other methods of treatment of disease. The most that can be said for any new method of treatment is that it is in some respect an addition to the armamentarium of the physician. Except in so far as a method of treatment may extend to projects regarded as contrary to public policy, the State does not prescribe nor proscribe.

The State would then offer no objection to chiropractic as such, nor to the restriction of the practitioner to this therapeutic means alone, but it would say that the chiropractor should conform to the standards of qualification for medical practice generally accepted in that State. These standards are maturity, character, education and recognition of education, and examinational tests as to information acquired.

The answer from the medical profession should be that a scientific testing of the method of treatment must be made, with incorporation of this therapeutic resource in the curriculum of the schools if it is justified by the results.

The answer of the chiropractors should be the establishment of a school of chiropractic in which only graduate physicians are to be received, so that the system may have the opportunity to stand or fall according to its own merits. This is the scientific, reasonable and just way of dealing with the problem.

What is chiropractic from the point of view of results? Does it cure? What does it cure? How does it cure?

The testimony of hundreds of persons is that it does cure. They were sick, now they are well. We have to deal here with a "stubborn fact". But which is the stubborn fact? Is it that the people were cured? Or that they were cured by realignment of the spinal vertebrae, the articulations of which were palpated? Or that they were cured by what the chiropractor did? Well, what did he do if he did not adjust the subluxations of the spine?

To believe that the chiropractor does what he says, is to be unduly credulous, for his claim is absurd, as anyone with even a slight knowledge of the anatomy of the human spine is able to perceive. Yet even a slight knowledge of human nature and of the power of suggestion makes the results intelligible.

The patient through his suffering becomes more susceptible to suggestion than he was in health. The physical contact of chiropractor with the patient (essential in many therapeutic systems), over the extended area of the spine, increases the suggestibility of the patient. It is important to note that the culmination of the procedure is the "chiropractic thrust" (see the Oregon law). The manipulation complements oral suggestion and the paraphernalia of the chiropractor. It may be going too far to say that the patient is hypnotized in the scientific meaning of that term; but certainly the patient is "hypnotized" in the sense that we mean when we describe the operation of the high pressure commercial salesman on his victim.

Finally what is chiropractic in the light of its history? The story is shot through with a tragic note, for in dealing with suffering humanity we find ignorance, sophistry, charlatanism, quackery, fraud. It is rife with commercialism, and in spite of the sincerity of some of its practitioners and in spite of the cures which are alleged, chiropractic is doomed. It cannot be saved even by establishing postgraduate schools, for it is essentially something different from what it claims to be. After all, we find nothing but the old, old story, the exploiting of the suggestibility of humanity, under a new name, and by a device that in time will pass into limbo with the metallic tractors of Dr. Elisha Perkins.

AMERICAN ACADEMY OF PEDIATRICS

In June, 1930, at the meeting of the American Medical Association in Detroit, the American Academy of Pediatrics was organized and on June 24 it held its first meeting, electing as officers Dr. Isaac A. Abt, of Chicago, president; Dr. John Lovett Morse, of Boston, vice-president, and Dr. Clifford G. Grulee, of Chicago, secretary and treasurer.

As stated in its constitution "the object of the Academy shall be to foster and stimulate interest in pediatrics and correlate all aspects of the work for the welfare of children which properly come within the scope of pediatrics. The Academy shall endeavor to accomplish the following purposes:

(a) To establish and maintain the highest possible standards for pediatric education in medical schools and hospitals, pediatric practice and research.

(b) To perpetuate the history and best traditions of pediatric practice and ethics.

(c) To maintain the dignity and efficiency of pediatric practice in its relationship to public welfare.

(d) To promote publications and encourage contributions to medical and scientific literature pertaining to pediatrics, none of which subjects are for pecuniary profit."

The founders of the organization, according to Dr. Isaac A. Abt, its first president, realized that there was no need for another scientific pediatric society; that something of outstanding value must come from this new organization if it is to fulfil its purpose, and that the work of other organizations should not be duplicated.

It has become almost essential, in the modern development of medical practice, that something of the old guild spirit should be revived; a type of organization which should establish standards of training and of qualification for the practice of an art. Specialization has come to be too lightly entered into by the unqualified who see in it only an opportunity for greater rewards from easier service. Dr. Abt asks the question: Is it right to permit any physician to declare himself a specialist in pediatrics on his own determination, without special preparation? "I think," he continues, "that the time is past when a young man, after a few weeks' attendance in a clinic, at home or abroad, may return to his native town or city and declare himself a specialist."

The aims of this new national society, then, are to establish standards of qualification for the practice of pediatrics; to insure a high level of pediatric training in medical schools and pediatric service in hospitals and in practice; to promote and help make effective the more valuable results of the White House Conference.

We, in Boston, feel that the conferring of the second presidency of the Academy on Dr. John Lovett Morse is a happy recognition of a long period of service and leadership and congratulate both the Academy and Dr. Morse on the selection. We hope that the organization of the Academy will be justified and that its high aims will be met and its young traditions maintained.

The revival of the guild idea in general we feel to be justifiable. No one can maintain the standards of a craft better than the craftsmen themselves, and it is fitting that a specialty of the importance of pediatrics should accord itself the same dignities and prerogatives as have been assumed by medicine and surgery. It is to be hoped that eventually all pediatricians of standing will affiliate themselves with the Academy and that membership will be considered as a guarantee of standing.

A MEETING OF INTEREST

On Monday, February 15 inst. two interesting papers will be read before the Boston Medical History Club, one entitled "Daniel Whistler and the First Treatise on Rickets" by Arthur B. Lyon, M.D., and the other by Theodore C. Greene, M.D., of Peiping, China who will speak on "The Ancient and Modern Practice of Medicine in China." Both papers are of medical interest and the second especially so because of conditions in the Far East.

THIS WEEK'S ISSUE

Contains articles by the following named authors:

Rushmore, Stephen. A.B., M.D. Johns Hopkins University Medical Department 1902. F.A.C.S. Surgeon, Massachusetts Women's Hospital. Consulting Gynecologist, Symmes Arlington Hospital. Vice President, Boston Surgical Society. Secretary, Massachusetts State Board of Registration in Medicine. His subject is "The Award of the Bigelow Medal." Page 261. Address: 520 Commonwealth Avenue, Boston.

Lund, Fred B. A.B., A.M., M.D. Harvard University Medical School 1892. F.A.C.S. Surgeon-in-Chief, Carney Hospital. Consulting Surgeon, Boston City Hospital, Newton Hospital, etc. President, Boston Surgical Society. His subject is "Introductory Address at Presentation of the Bigelow Medal to Dr. John M. T. Finney." Page 262. Address: 319 Longwood Avenue, Boston.

Finney, John M. T. A.B., D.S.M., F.R.C.S. (Eng., Ire.), Hon. M.D. Harvard University Medical School 1889. F.A.C.S. Professor of Clinical Surgery, Johns Hopkins University Medical Department. Surgeon, Johns Hopkins Hospital and Visiting Surgeon, Union Memorial Hospitals, Hospital for Women of Maryland, Church Home and Infirmary. His subject is "Changing Conditions in Surgery Since the Time of Henry Jacob Bigelow." Page 263. Address: 3119 St. Paul Street, Baltimore, Maryland.

Ladd, William E. A.B., M.D. Harvard University Medical School 1906. F.A.C.S. Clinical Professor of Surgery, Harvard Medical School. Chief of Surgical Service, Children's Hospital. His subject is "Congenital Obstruction of the Duodenum in Children." Page 277. Address: 66 Commonwealth Avenue, Boston.

Jameson, James W. A.B., M.D. Columbia University College of Physicians and Surgeons 1905. F.A.C.S. Attending Surgeon, Margaret Pillsbury General Hospital, Concord, New Hampshire. Consulting Surgeon, Peterborough Hospital, Peterborough, New Hampshire. His subject is "Diverticula of the Intestine." Page 284. Address: 48 Pleasant Street, Concord, New Hampshire.

Sprague, Howard B. A.B., M.D. Harvard University Medical School 1922. Assistant Physician, Massachusetts General Hospital.

Visiting Physician and Research Director, House of the Good Samaritan. Assistant in Medicine, Harvard Medical School, Courses for Graduates. Address: 270 Commonwealth Avenue, Boston. Associated with him is:

CAMP, PAUL D. A.B., M.D. University of Virginia 1928. Cardiac Resident and Dalton Scholar, Massachusetts General Hospital 1930-1931. Address: University College Hospital, London, England. Their subject is "Intravenous Hypertonic Glucose in the Treatment of Cardiac Disease—Preliminary Report." Page 288.

HUDSON, HENRY W. JR. M.D. Harvard University Medical School 1925. Assistant in Surgery, Harvard Medical School. Assistant Surgeon, Boston Children's Hospital and Cambridge Hospital (Woolson Building). Surgeon to New England Home for Little Wanderers. His subject is "Acute Pneumothorax. Report of a Case in an Infant of Seven Months." Page 291. Address: 66 Commonwealth Avenue, Boston.

MASSACHUSETTS LEGISLATIVE NOTES

HOUSE 226 (CHIROPRACTIC BILL) is scheduled to be heard on Wednesday, March 2, before the Committee on State Administration, Room 481 at 10:30 A. M.

HOUSE 904—This bill provides that no person shall be required to submit to vaccination or inoculation unless the physician supplies said person with a written statement guaranteeing the purity of the virus to be used and also that any physician vaccinating a person without the consent of a child's parents or guardian or consent of the adult, shall be liable for any resulting injuries.

HOUSE 929—This bill provides for a large board to which a report shall be made of all internal surgical operations performed in this Commonwealth, setting forth all facts relating thereto together with samples of removed tissues. Within thirty days after such operation a second report shall be filed giving the so-called end results.

HOUSE 911—An Act to prohibit the Employment of Children under Sixteen Years of Age in Certain Occupations.

HOUSE 897—An Act relative to Appropriations by Towns for Hospital Free Beds.

HOUSE 741—An Act relative to the Production, Distribution and Sale of Milk and Cream. This bill defines the term "dairy farm" and provides for a board dealing with the production of milk with powers to administer the necessary regulations for its distribution.

HOUSE 877—An Act to regulate the Payment of Compensation for Total Incapacity under the Workmen's Compensation Act.

HOUSE 878—An Act relative to Payments under the Workmen's Compensation Act for Total Incapacity.

HOUSE 876—An Act to regulate the Payment of Compensation for Partial Incapacity under the Workmen's Compensation Act.

HOUSE 874—An Act relative to the Discontinuance of Compensation under the Workmen's Compensation Act.

HOUSE 954—An Act relating to Premium and Interest Charges on Workmen's Compensation Insurance Policies.

HOUSE 991—An Act to allow Cities and Towns to Condemn Certain Property for the Purpose of Improving Health and Sanitary Conditions.

HOUSE 1061—An Act to protect Persons Injured in the Course of their Employment from Unscrupulous Doctors in the Employ of Insurance Companies.

HEARINGS

The following bills have been scheduled for hearing:

HOUSE 755—Petition of the Massachusetts County Commissioners' Association that counties be authorized to borrow money temporarily for the maintenance of county tuberculosis hospitals. February 18. Room 489. 11:00. Counties, Joint.

HOUSE 1061—Petition of William Welch and others that employees injured in industrial accidents be not required to visit doctors designated by insurance companies or the Department of Industrial Accidents. February 16. Room 435. 10:30. Labor and Industries.

HOUSE 897—Petition of B. Loring Young that towns be authorized to appropriate not more than three thousand dollars annually for maintenance of free beds in hospitals. February 17. Room 433. 10:30. Municipal Finance.

HOUSE 679—Petition of Thomas F. Carroll that the Department of Public Health maintain medical and health clinics at beach resorts in certain cities and towns. February 18. Room 450. 10:30. Public Health.

HOUSE 682—Petition of Herbert P. Shaughnessy for an amendment of the law relative to the sale of drugs and medicines. February 18. Room 450. 10:30. Public Health.

HOUSE 188—Petition (from files of 1931) of Arsene J. Pare for the establishment of a board of examination and registration to regulate the practice of magnetic healers. Feb. 17. Room 481. 10:30. State Administration.

HOUSE 878—Petition of Dennis F. McCarthy that employees totally incapacitated in industrial accidents be paid compensation for not more than one thousand weeks. February 16. Room 435. 10:30. Labor and Industries.

MISCELLANY

PHYSICIANS REGISTERED BY EXAMINATION HELD IN NOVEMBER 1931

COMMONWEALTH OF MASSACHUSETTS BOARD OF REGISTRATION IN MEDICINE

Akerson, Irving Benjamin, 63 Beaconsfield Road, Brookline, Mass.

Allen, Alvin Johnson, 66 Mystic Avenue, Somerville, Mass.

Barton, Walter Earl, Worcester State Hospital, Worcester, Mass.

Berman, Nathaniel, Cambridge City Hospital, Cambridge, Mass.

Bernier, Leo Joseph, 52 Warren Avenue, Warren, R. I.

Breen, Joseph Victor, 14 Mattoon Street, Springfield, Mass.

Cabitt, Henry Leo, Beth Israel Hospital, Boston, Mass.

Carmichael, Hugh Thompson, Worcester State Hospital, Worcester, Mass.

Cassidy, James Michael, 10 Cottage Street, Holyoke, Mass.

Cassin, Benjamin Irving, Long Island Hospital, Boston, Mass.

Chafetz, Max, 138 Bennington Street, East Boston, Mass.

Chefitz, Benjamin Jacob, 20 Ingleside Street, Roxbury, Mass.

Clapp, William Bailey, North Grafton, Mass.

Cohen, Samuel, 294 Chambers Street, Boston, Mass.

Copulsky, Nathaniel, 2059-89th Street, Brooklyn, N. Y.

Cottrell, Martha Sanderson, 34 North Prospect Street, Amherst, Mass.

Crooker, James Lester, 16 Michigan Avenue, Somerville, Mass.

Dawson, Francis Phillip, 275 Mass. Avenue, Danvers, Mass.

Drapeau, Raoul Laurent, 17 Mt. Washington Street, Lowell, Mass.

Ellis, Sydney, 200 Chelsea Street, East Boston, Mass.

Farrell, Malcolm Joseph, 14 Merrimac Street, Woburn, Mass.

Fasce, Charles Francis, 1302 East Street, Springfield, Mass.

Fiedler, Howard Taft, Westborough State Hospital, Westborough, Mass.

Glass, William Everett, Worcester State Hospital, Worcester, Mass.

Glazer, Carl, Quincy City Hospital, Quincy, Mass.

Glidden, Henry Spencer, 123 Florence Street, Melrose, Mass.

Gorman, Arthur Joseph, 882 Huntington Avenue, Boston, Mass.

Grant, George Joshua Moody, 339 Westford Street, Lowell, Mass.

Harris, Harold Beecher, Myrtle Street, South Hanover, Mass.

Hemond, Fernald Joseph, St. Luke's Hospital, Pittsfield, Mass.

Hurd, Archer Louis, 77 Central Avenue, Newark, N. J.

Jolma, Keijo Kullewo, Quincy City Hospital, Quincy, Mass.

Katz, Barnet, 355 Dudley Street, Roxbury, Mass.

Kirkendall, Henry Laing, Memorial Hospital, Worcester, Mass.

Kowalski, Stephen Francis, 120 Centre Street, Danvers, Mass.

Leclair, Rene Bernard, State School, Belchertown, Mass.

Littlefield, Leland Aaron, Montreal General Hospital, Montreal, Que.

MacNaughton, Peter Duncan, 1463 Beacon Street, Brookline, Mass.

McHugh, William Patten, 69½ Boston Street, Salem, Mass.

Nicosia, Angelo, 127 Main Street, Mt. Holly, N. J.

Nigro, Michael Francis, 184 Central Avenue, Medford, Mass.

Peterson, Stanley Edward, Brockton Hospital, Brockton, Mass.

Piotrowski, Walter Louis, 13 Becket Street, Salem, Mass.

Polcari, Eda Anne, 21 Ashland Street, Arlington, Mass.

Prescott, Blake Daniels, 4 Vernon Street, Hartford, Conn.

Ramsey, Frank Banta, 605 Commonwealth Avenue, Boston, Mass.

Ravit, George Jonathan, Boston City Hospital, Boston, Mass.

Rheingold, Joseph Cyrus, 2120 N. Hedzie Avenue, Chicago, Ill.

Russell, Rolfe Spaulding, Deerfield, Mass.

Saklad, Elihu, 80 White Street, East Boston, Mass.

Schwartz, Carol, Danvers State Hospital, Hathorne, Mass.

Small, Simon, Boston City Hospital, Boston, Mass.

Smith, Leonard, Box 55-Station D., New York City.

Smith, William, 1534 Commonwealth Avenue, Boston, Mass.

Speliopoulos, Louis George, North Hudson Hospital, Union City, N. J.

Stivers, George Lincoln, Belmont Hospital, Worcester, Mass.

Tosney, Harold John, Taunton State Hospital, Taunton, Mass.

Tarrant, Harold Alfred, 10 Annabel Street, Dorchester, Mass.

Vernaglia, John Benjamin, Boston City Hospital, Boston, Mass.
Vuornos, Sirkka Elizabeth, 400 Walk Hill Street, Boston, Mass.
Weiss, Louis Robert, 37 Howland Street, Roxbury, Mass.
White, Hilary Francis, 50 Cottage Street, Fall River, Mass.
Wilson, Clyde Leonard, 605 Commonwealth Avenue, Boston, Mass.
Yens, Otto Christian, 18 Cedar Lane Way, Boston, Mass.

Endorsements of National Board Registrations Since Last Report

Cass, John William, Jr., 6 Strathmore Road, Brookline, Mass.
Gilbert, Alfred Edmund, South Lancaster, Mass.
Heffron, Roderick, 81A. Phillips Street, Boston, Mass.
Kahalas, Israel, Rutland State Sanatorium, Rutland, Mass.
Kisiel, William John, 3 Olive Avenue, Holyoke, Mass.
Merritt, Hiram Houston, 123 St. Paul Street, Brookline, Mass.
Naterman, Hyman Louis, 61 Intervale Street, Roxbury, Mass.
Nelson, Herbert Bristol, 19 Bay State Road, Boston, Mass.
Sidwell, Doris May, Danvers State Hospital, Hathorne, Mass.
Yood, Alfred, 25 Esmond Street, Dorchester, Mass.

In the report of July 14, 15, 16, 1931, examinations, it was incorrectly stated that fourteen Harvard graduates were registered. The report should have read thirteen registered and one rejected.

National Board Endorsements Since Last Report

Tufts	4
Harvard	2
Johns Hopkins	1
Coll. Medical Evangelists	1
Univ. Vermont	1
Yale	1
	10

A RADIO MESSAGE PREPARED AND SPONSORED BY THE COMMITTEE ON PUBLIC EDUCATION OF THE MASSACHUSETTS MEDICAL SOCIETY FOR THE DEPARTMENT OF PUBLIC HEALTH

Mental Health*

With the progress that has been made in our understanding of the mental life of the individual by those particularly interested and specially trained in his field, there has also been an awakening of interest on the part of the public in the subject of mental health and mental hygiene. Yet there still remains strongly intrenched in the minds of the masses of intelligent people, the idea that anything which pertains to disorders of the mind or malfunctioning of our mental processes is a subject that should not be discussed in public. It is the skeleton most commonly found in the family closet. Few people can go back more than one or two generations in their family history without finding someone who has been definitely mentally sick and often enough they may be doubtful of the mental stability of those with whom they come in immediate contact.

This attitude of being unwilling to admit—and, in fact, running away from—obvious indications of poor mental health has been due to the fact that until within comparatively recent years a person who was suffering from any disorder of the mind, however mild, was looked upon as one needing care and treatment in an institution. The mentally sick person was viewed as one whose mind was so twisted and warped that any type of erratic, bizarre or asocial type of conduct might be expected from him, for it was customary to associate delusions, hallucinations and intellectual deterioration with all those persons who were considered mentally unwell.

As our medical knowledge began to expand and our vision became broader, we recognized the fact that mental health was not sharply divided by a definite barrier from mental illness and that mental health like physical health was only relative. In the struggle for existence physical health becomes impaired by various infecting agents, bacteria, accidents, and by the general wear and tear of the bodily organs, while one's mental processes are more likely to be affected by worry, fear, anxiety, disappointments, excitement and the ever-present stresses and strains of industrial competition and intellectual pursuits. We also have become keenly appreciative in recent years that physical stamina and mental stability do not exist over any long period of time independently one of the other. It is common knowledge to the layman that although one's sense of well-being and one's mental tone toward life do not always bear a direct relation to any physical illness, poor physical health must obviously affect one's emotional outlook upon life. On the other hand, we are aware that practically every symptom in the whole category of medicine may have its basis or may find its cause in psychogenic or emotional factors.

The importance of mental health becomes quite apparent when we attempt to interpret in terms of clinical examinations and laboratory tests the symptoms and incapacities found in many of the patients coming to our out-patient clinics and private offices. As physicians, we are brought face to face with the fact that probably not more than 50% of all the individuals socially and industrially incapacitated are so handicapped by any disease process affecting the various bodily organs. The remain-

*Broadcast December 31, 1931, Station WBZA, 4:50 P. M., Hotel Bradford, Boston.

ing one-half of these patients are rendered unhappy and inefficient because they as individuals are not equipped to meet life with all its conflicts and competitions adequately. For them illness is a retreat in time of trouble, and is ofttimes unconsciously being utilized by individual patients as an excuse for failure.

I have already stated that the pendulum of mental health swings through a wide arc. Its symptoms are numerous and varied. It manifests itself in devious ways some so subtle and obscure that they may pass by unnoticed even by those with whom we are in most intimate contact for years. Other symptoms are so marked that the patient immediately gets into conflict with society. Mental illness, like physical illness, affects not only those who are constitutionally below par but also the robust.

It is exceptional to find even among those who are best endowed by virtue of their heredity, environment, training and education, individuals who at the age of 50 or 60, can look back over their lives without finding some period of longer or shorter duration when they suffered from poor mental health. There is no more reason why the nervous system through which mental processes are expressed should remain unaffected by the stresses and strains of life than for any other of the various bodily organs or systems to do so; and there is no logical reason why, if the problem of mental health is met as frankly as that of physical health, modern treatment should not give the same relief. Relatively mild types of mental illness will respond to treatment in a comparatively short time. The more severe types will require more intensive study and longer treatment and the prognosis will be more grave. We recognize that there are certain malignant types of mental disease, as there are malignant types of physical disease, for which for the moment we have only the palliative methods of treatment.

The handicap under which the person afflicted with poor mental health invariably suffers and which the person physically incapacitated escapes, is brought about by the refusal of either the patient or the family to face the situation perfectly frankly, admitting that the individual is mentally sick. It is the old bugaboo—the fear of the word "mental" and its association with asylums and its termination in complete disintegration.

This attitude has prevented thousands of mentally sick individuals from getting adequate treatment at a time when it could have been of value, and when the patient was in a condition to coöperate, which is an important factor in the treatment of any illness whether it be mental or physical.

In summing up this talk, the following points should be stressed:

1. Mental health is a state of mind which permits the individual to approach his maximum efficiency and attain the greatest amount of satisfaction out of life with a minimum amount of friction.
2. Mental health like physical health is only relative. Only a very small per cent. of those individuals who are mentally sick are suffering from any obvious evidence of their illness or need care in sanatoria or custodial supervision.
3. Poor mental health may be the result of poor physical health but is more likely to be the result of worry, fear, disappointments and other emotional causes.
4. Poor mental health may manifest itself in practically any type of physical symptom. There are usually many symptoms but few signs. That is, the doctor's examination and laboratory test do not explain the cause of the symptoms.
5. Acute mental upsets are as amenable to treatment as acute physical illnesses.
6. The most important factor in the treatment of mental illness is the early recognition that the patient is sick. This means that the patient and his family must be frank in facing any problem which concerns the health and happiness of the patient. If it is evident or if there be any suggestion that the underlying causes are of a mental nature, do not run away from these facts. Face them frankly and seek competent advice as you would for any physical ailment.

SPAHLINGER CLAIMS TO HAVE PRODUCED A RELIABLE TUBERCULOSIS VACCINE

Henri Spahlinger of the "Institute Bacteriotherapique" of Geneva claims to have perfected a formula for an anti-tuberculosis vaccine which is effective in establishing immunity in human beings and animals.

While hope "spring eternal," etc., the conservatism of the medical profession warrants waiting for expert confirmation before giving endorsement to this claim.

A DISCUSSION OF CHIROPRACTIC BEFORE THE NATIONAL CIVIC FEDERATION, WOMAN'S DEPARTMENT, MASSACHUSETTS SECTION

House Bill 226

Initiative Petition for the Regulation and Recognition of Chiropractic

Arguments in Favor

Chiropractic is a comparatively new science, its name coming from the Greek "Chiro", meaning by hand.

Everyone knows the construction of the human back and they do know that the spine contains the

Arguments Against

The proposition to establish a State Board for the examination and licensing of Chiropractors in Massachusetts resolves itself into the question of whether the Commonwealth of Massachusetts wishes to change a policy which has existed for

vital great nerve, the so-called spinal cord. Few, however, know that from this spinal cord branches out through small spaces between the vertebraes,* nerves on both sides of the back which supply impulses from the brain to every part of the body.

Chiropractic claims that through injury these vertebraes* become somewhat out of position which causes (to use the language of medical profession) nerve-root pressure. It is of course logical that if a vital nerve is constricted that the organ supplied by it will not be normal; while chiropractic does not claim to cure all diseases of which the human race is heir, they do claim that due to their specialized knowledge of the construction of the human spine, aided by their very well-grounded studies of anatomy, physiology and pathology of the body that they can relieve the condition of the organ caused by this nerve-root pressure. When it is noted that despite the very vigorous opposition of the medical associations throughout the country that Chiropractic is now recognized in forty States of the Union and in the District of Columbia it is logical to suppose that there must be some merit in this system of drugless healing. It is not so different from the present medical theories when we reflect that during the last two years there have been papers read by eminent physicians before medical associations pointing out that such disease* as angina pectoris and stomach ulcers have been greatly aided by the severing of the nerve supplying that particular organ at the point of the trouble.

Drugless healers are but a short point removed from the writings and the clinical work of the best physicians, for how often are we told by our doctors today, "No, we use very few drugs today, I am leaving no prescription; this patient must have supporting treatment and that is, rest, diet, air, sunlight and cleanliness." In short the best minds in all branches of the healing arts are working with common sense on one hand and Mother Nature on the other.

The Chiropractor does not practice the use of drugs, although he admits in rare cases drugs may be indicated. The Chiropractor does not use serum therapy, although he does not dispute their use in their proper fields. The Chiropractor recognizes that surgery is a great and important branch of the healing arts and he approves of such proper operable cases. These are, however, not within his province, and he therefore sends such patients to the proper physician or surgeon.

In this bill he asks that he may be allowed to adjust the backs of the thousands of people who desire this treatment without being put to jail at the behest of a disgruntled medical man, he secondly asks for the protection of the integrity of his profession that a Chiropractic Board be created, composed of properly educated and qualified Chiropractors, that may examine each candidate as to his educational qualifications, character and ability.

The medical profession while admitting, as they have up to date, that Chiropractic has good in it, although they insinuate of dire tragedies that they the past thirty-eight years; a policy which has been most satisfactory to nearly six thousand physicians, including Osteopaths.

Previous to 1894 there was no legal machinery by which the Commonwealth could supervise the practitioner of medicine or the practice of medicine itself. Anyone, whether he held a degree of M.D. or not, could practice medicine in Massachusetts. It is not difficult to imagine the confusion which resulted. The legislation of 1894 created a Board of Registration in Medicine. It stipulated that henceforth any person wishing to practice medicine in Massachusetts must give evidence of some training in medicine and pass an examination, which would demonstrate his qualifications to treat the ills and injuries of the public. This legislation was created not for the doctors but in the interest of the public. It was a guarantee on the part of the Commonwealth that the man who held himself ready to treat the health of the public had some qualifications for doing the work for which he said he was fitted.

Since its creation the Board of Registration in Medicine has insisted, and justly so, that those asking the privilege of practicing medicine in Massachusetts shall prove by examination that they have mastered certain fundamentals which prepare them to care for the health of the community. About 1912 some persons claimed that they were able to cure the ills of the human body by special manipulation of the spine. The Board of Registration in Medicine claimed that these people were practicing medicine and, as they had not been licensed after an examination before the State Board of Registration in Medicine, were breaking the law. These practitioners were arrested, were tried and convicted. They appealed to the Supreme Judicial Court of Massachusetts and in a comprehensive opinion handed down by Chief Justice Rugg of the Supreme Judicial Court it was declared that the Chiropractor, so-called, when using means peculiar to his method of practice, was practicing medicine; consequently, if he wished to practice his peculiar methods, he must first present himself to the Board of Registration in Medicine for an examination in medicine. This decision was made for the protection of the public.

The Chiropractor now avers that he should not be compelled to take an examination such as other practitioners of medicine take, but that he should have the privilege of taking an examination before a separate Board of Chiropractors, who would examine and qualify him to practice Chiropractic. The present Board of Registration in Medicine does not insist that the one who receives his license should practice any particular or peculiar school of medicine. It simply insists that anyone who wishes to treat the sick in Massachusetts must pass an examination given by the State Board. When the candidate has received his license from the State Board, he may choose any method or any procedure which he thinks is fitted to effect a cure in his patient. The State Board does not restrict his therapeutic activities. Can any fair-

*Original copy.

could speak of and yet which they have been challenged to produce their proof, still prefer to argue first relative educational values. Yet last year the Massachusetts Chiropractors produced a chart which showed that the three most illustrious medical schools and the three best Chiropractor colleges had practically the same number of study hours, with the exception that the Chiropractor did not take prescription medicine, surgery, or obstetrics, none of which of course they could use, but when the hours of these subjects were met by the Chiropractic subjects the equation was still unchanged; no evidence was introduced in dispute of this chart.

The second objection has been a brilliant platitude, namely, "Let us preserve the single standard", which really means, of course, that the Chiropractors should go to our medical schools, subscribe to all our doctrines, renounce their ideas, and then we have no objections. Why should they have? A single standard as a standard is a splendid thing, but there is a vast difference between a single standard and similar standard. A doctor can saw open the skull of a patient and can go into the vital recesses of the very brain. A Chiropractor can only massage the back. A doctor can take an aspirating needle and puncture the wall of the heart where a matter of an eighth of an inch means life or death for the patient; the Chiropractor can massage the back. A doctor can rip open the abdomen and cut away parts of vital organs. A doctor can saw off a limb as the unconscious patient almost leaves the table as the great sciatic nerve is severed. A doctor can give drugs measured by fractions of a grain so powerful is its effects.* Day after day and year after year a doctor carries the lives of his patients upon a miscalculation of a minute quantity or the slightest twitch of a knife. "A single standard." Why are the doctors so silent upon the question of the single standard for the dental surgeon; not that they did not fight them before they obtained their recognition.

The third item is the danger of increase in contagion, or in tuberculosis, or in cancer. Such claims, of course, are unfounded and are simply for the purpose of intimidating the advocates of the Chiropractor. Now, no profession is more likely to produce statistics in their own favor than are the doctors. Forty States have recognized Chiropractic and some for a long time. Why don't they prove this statement by producing records of contagion and the increased mortality tables of cancer and tuberculosis in their States?

The greatest mistake that this present generation has made has been to use the necessary but highly dangerous police powers, presumably in a spirit of paternalism, but frankly in every case through the propaganda of an organized minority.

MASSACHUSETTS CHIROPRACTIC ASSOCIATION.
JOSEPH A. CONWAY, *General Counsel.*

*Original copy.

minded, just and careful citizen object to the safeguard which the laws of the Commonwealth have thrown around the well-being of its citizens?

There is a similar law governing another profession and we hear no complaint from members of that profession, or from candidates who wish to enter it, against the procedure of admission to the Bar. Every person who wishes to practice law in Massachusetts must pass an examination given by the State Bar Association. This procedure has the approbation of every judge who sits on the bench and every person who practices law in Massachusetts. No candidate can refuse to take this examination. No one complains saying, "I should not be compelled to take a general examination in law. I intend to practice probate law; therefore, I should have a separate board examine me," or "I intend to practice corporation law, therefore, I should have a separate board," and so on ad infinitum. The stand of the Bar Association is, "Gentlemen, you must all take an examination in the fundamentals if you wish to practice law in Massachusetts." Exactly the same advice is given to those wishing to practice medicine in Massachusetts. "Gentlemen, you must all take an examination in the fundamentals upon which the practice of medicine is based." No matter how eminent or how skillful a physician or surgeon may be, if he should come to Massachusetts with the intention of practicing medicine, he must pass an examination given by the State Board of Medicine. No professor from a medical school, no eminent practitioner of surgery or medicine, no research worker can be found in this State who will support the petition for a board of examiners in Chiropractic.

Massachusetts has always maintained a high standard of educational qualifications. The practitioners of medicine in Massachusetts have held an enviable reputation in the world of medicine. These high standards have been maintained by means of custom, usage and law. Do the citizens of Massachusetts wish in any way to weaken these standards or minimize their importance by unfair, unjust or discriminatory means?

The health of the public and the cure of sickness can only be brought about by adhering to the policy which Massachusetts now follows.

CHARLES E. MONGAN, M.D.,

Former Vice-President of the Massachusetts Medical Society; Past President of the New England Obstetrical and Gynecological Society; Delegate from the Massachusetts Medical Society to the American Medical Association.

CORRESPONDENCE

THE EFFECT OF THE FINANCIAL DEPRESSION ON THE WORK OF THE ROBERT B. BRIGHAM HOSPITAL

Robert B. Brigham Hospital
125 Parker Hill Avenue
Boston 20, Mass.

January 30, 1932.

Editor, *New England Journal of Medicine*,

Conditions brought about by the general depression have caused the Directors of the Robert B. Brigham Hospital to modify the policy of admission.

Although we are continuing our free work, we must admit considerably fewer free patients than formerly. We are, however, offering a limited number of ward beds to Boston citizens at $15.00 a week and to non-residents of Boston at $21.00 a week.

These weekly fees include the services of the active Medical Staff. A flat rate of $5.00 will be made at the time of admission to cover laboratory routine work including basal metabolisms. Extra charges at minimum rates will be made for x-rays, etc.

Only chronic cases which may respond to constructive treatment will be admitted, as our aim is not only to give relief but to restore patients wholly or in part to normal activity. We shall be glad to have such patients referred to us.

The work of the Private Wing will be carried on in the usual manner. Patients, both acute and chronic, will be admitted if attended by members of the regular Staff of the hospital or by the Courtesy Staff.

Requests for admission or further information may be made either by letter or telephone—Regent 6966.

Very truly yours,

EDITH I. COX, *Superintendent*.

RECENT DEATHS

FULTON—DR. JOHN FARQUHAR FULTON died at his home in St. Paul, Minn., February 1, 1932. He was born in 1859 and practiced for many years as a specialist in Otolaryngology, serving at one time as professor of ophthalmology and otolaryngology at the University of Minnesota Medical School in Minneapolis. His son, Dr. J. F. Fulton, a graduate of the Harvard Medical School and Oxford University, is now Sterling Professor of Physiology at the Yale Medical School.

WALKER—DR. WILLIAM M. WALKER died at the Massachusetts General Hospital January 30, 1932. He was born in 1865 and graduated from the Tufts College Medical School in 1894. He was a retired member of the Massachusetts Medical Society. His home was in Beachmont and he had an office at 366 Commonwealth Avenue, Boston.

OBITUARIES

JAMES E. BLAISDELL, M.D.

James E. Blaisdell, M.D., son of Captain James Blaisdell, died in his seventy-eighth year at the Massachusetts Memorial Hospitals on January 3, 1932. He was born in Chelsea, Massachusetts, February 12, 1854. He received his early education in the Public Schools of Chelsea, graduating from the Chelsea High School in 1872. In 1876 he received his Bachelor's degree from Wesleyan University. In 1879 he was graduated from Boston University School of Medicine, receiving his M.D. at that time.

Dr. Blaisdell was devoted to the general practice of medicine in Chelsea and was on the general staff of the Rufus Frost General Hospital of that city. He was a member of the Massachusetts Homeopathic Medical Society. In 1894 he attended clinics in the hospitals of London and Edinburgh and while in Scotland he became a member of the Canongate Kilwinning Lodge (said to be the oldest in the world), Shekinah Chapter, Napthali Council, Palestine Commandery, Aleppo Shrine.

Dr. Blaisdell was connected with St. Luke's Episcopal Church of Chelsea. He was particularly fond of good music; played the zither and attended Symphony Concerts with great regularity and appreciation.

His health failing in 1916, he accepted a position on the Information desk at the Massachusetts Memorial Hospitals and later became night admitting officer at the Robinson Maternity; and for a few months he acted as Clinical Secretary.

Dr. Blaisdell is survived by his wife, who before their marriage was Miss Colena Elizabeth Cook; and by two daughters, Miss Esther Blaisdell of South Dartmouth, Mass., and Mrs. D. D. Erwin, Pittsfield, Mass.

RESOLUTIONS ADOPTED BY THE ST. ELIZABETH'S HOSPITAL ON THE DEATH OF DR. JOHN J. DUNPHY

Whereas God in His Infinite wisdom has ordained that He should take from our midst our loyal and esteemed colleague, Dr. John J. Dunphy.

And Whereas: By this bereavement the St. Elizabeth's Hospital has suffered a great loss in the untimely death of a brilliant and promising member of its staff.

And Whereas: The staff severally and individually, with great sorrow mourn the departure of a beloved coworker and miss the kindly and generous outpouring of his knowledge for the benefit of all.

Be it resolved that the staff express to his family our full recognition of his merit, and voice in some small degree, our sense of loss and personal grief at his departure from our midst.

Further be it resolved that as a matter of history there should be inscribed on our records our high sense of his value as a man and a physician, with

due appreciation of his intellectual attainments, and greater appreciation of his willing and generous gift of his efforts for the benefit of mankind.

Be it resolved that a copy of these resolutions be presented to his family as an expression of the feeling of the staff, and in some small measure to indicate our sense of personal loss, and to show the grief which is in our hearts.

Committee for the Staff,
JOHN J. WHORISKEY, M.D.,
JOHN F. CASEY, M.D.,
MICHAEL E. MCGARTY, M.D.

NOTICES

AMERICAN COLLEGE OF PHYSICIANS TO AWARD PRIZE TO DR. O. T. AVERY

The American College of Physicians recently selected Dr. O. T. Avery of the Hospital of the Rockefeller Institute of New York City as the recipient of the John Phillips Memorial Prize for 1932.

This prize, an annual award by the College in the sum of $1500.00, is given to perpetuate in the College the memory of Dr. John Phillips of Cleveland, a man of outstanding accomplishments as investigator, teacher and physician, for many years a member of the Board of Regents of the American College of Physicians, who gave his life in saving others on the occasion of the Cleveland Clinic disaster on May 15, 1929.

The Committee on the John Phillips Memorial Prize, through its chairman, Dr. James H. Means of Boston, recommends the award, "To Dr. O. T. Avery for the series of studies upon the Pneumococcus in which he has played a leading rôle, beginning with the discovery of the type-specific soluble capsular polysaccharides and culminating in the discovery of a bacterium producing an enzyme which splits the polysaccharides of Type 3 Pneumococcus in vitro, thus rendering it susceptible to phagocytosis and thereby protecting the animals infected with it."

The Sixteenth Annual Clinical Session of the College will be held in San Francisco during the week of April 4, 1932. Dr. Avery will deliver an address, "The Rôle of Specific Carbohydrates in Pneumococcus Infection and Immunity", at the Convocation on Wednesday evening, April 6. At the conclusion of Dr. Avery's address, the prize will be presented to him by Dr. S. Marx White of Minneapolis, President of the College.

The distinction of this award is enhanced by the fact that although it was available the previous year, it was not possible to decide on a suitable recipient. This is, therefore, the first award made. It is the hope of the officers and members of the College that this annual prize in memory of a distinguished colleague may, by recognizing merit, be a continuing stimulus to investigators in those subjects having a direct bearing on the advancement of Clinical Science.

THE MOTHERCRAFT DISPLAY IN THE BOSTON PUBLIC LIBRARY

By invitation of the Deutches Hygiene Museum of Dresden, a Mothercraft exhibition has been prepared by Mrs. May Dickinson Kimball, Chairman of Mothercraft in the Massachusetts State Federation of Women's Clubs and Mothercraft Specialist in the General Federation.

The invitation to present this exhibit to Dresden was brought about through the interest of Carl L. Schrader, Supervisor of Physical Education in Massachusetts, who with Mrs. Schrader, President of the State Federation, visited Dresden and there became acquainted with Dr. Martin Vogel, Scientific Director of the Museum. It is interesting that this Mothercraft education work which originated in Massachusetts will be shown in the International Hygiene Hall, which, though only recently opened, has already been visited by 5,000,000.

This Mothercraft exhibit prepared for Dresden may be seen in the exhibition room of the Boston Public Library during the first two weeks of February, 1-14. A cordial invitation is extended by the Mothercraft Department to visit it to club women, teachers, school and public health nurses and the general public. Mrs. Mabel T. Hart, Chairman of Exhibits, and Mrs. W. W. Waldheim of the Mothercraft Department will be in charge of the Mothercraft display in the Boston Public Library.

MEDICAL CLINIC AT THE PETER BENT BRIGHAM HOSPITAL

At 3:30 P. M., on Thursday, February 18, in the Amphitheatre of the Peter Bent Brigham Hospital, a medical clinic will be given by Dr. Henry A. Christian, to which physicians are cordially invited. The clinics will be held regularly on Thursday afternoons.

RADIO HEALTH MESSAGES

JANUARY-FEBRUARY-MARCH, 1932

Sponsored by the Public Education Committee of the Massachusetts Medical Society and the Massachusetts Department of Public Health.

Courtesy WBZA. Thursdays at 4:50 P. M.

February
18 The Common Cold
25 Whooping Cough

March
3 The Psychology of the Crippled Child
10 Personal Rights vs. Public Safety
17 Electrical Hazards in the Home
24 Can High Blood Pressure Be Avoided?
31 Rose Cold and Hay Fever

STATE HOUSE BROADCAST

Sponsored by the Massachusetts Department of Public Health.

Courtesy WEEI. Fridays at 12:30 P. M.

Health matters of public interest discussed by the Division Directors of the Department.

RADIO HEALTH FORUM

Queries from the public are answered under the sponsorship of the Department of Public Health.

Courtesy WEEI. Fridays at 4:50 P. M.

Questions on Health and Prevention of Disease may be sent to: Radio Health Forum, State Department of Public Health, State House, Boston.

REPORT AND NOTICES OF MEETINGS

THE WILLIAM HARVEY SOCIETY

The William Harvey Society held its monthly meeting on January 8, 1932, in the auditorium of the Beth Israel Hospital. Mayor Curley, scheduled to speak on "What Boston Does for the Promotion of the Public Health", was unable to attend owing to unforeseen plans demanding his presence in Washington, and Dr. Charles F. Wilinsky, Deputy Health Commissioner of Boston and Director of the Beth Israel Hospital, delivered an address on the above subject.

The speaker praised at length the very great interest of His Honor, the Mayor, in the welfare and health of the people of the City and emphasized that this has brought great recognition and prestige to Boston and to Mayor Curley.

Dr. Wilinsky traced the evolution of public health from what might be termed its very earliest conception in the form of the Mosaic code with its emphasis on cleanliness, dietary prohibitions, etc., to the very modern concept of public health. He called attention to the early Grecian emphasis on personal hygiene and to the Roman appreciation of sanitary precautions, but stressed the fact that the real progress in the promotion of health and the control of disease may be properly regarded as an achievement of the most recent 100 years, its foundation being laid in what has been aptly called the "sanitary awakening" based upon the situation created because of the writings and legislation sponsored by Simon and Chadwick in England and here in Massachusetts by Lemuel and Shattuck. This resulted in much improvement in varying social fields and sound public health progress.

This period was followed by the discoveries of Pasteur, Koch and other contemporaries of that great Frenchman, Louis Pasteur, resulting in remarkable contributions which helped to characterize this cycle as the "golden age of bacteriology" with its material conquest of certain specific diseases among which cholera, yellow fever, malaria, bubonic plague, typhus and others may be listed as notable examples.

Intelligent communities are not only familiar with what may be done but are actively carrying on programs for the control of smallpox, diphtheria, typhoid, tuberculosis, and other enemies of mankind. The speaker traced the progress in the reduction of these diseases and particularly in the lowering of the mortality among the young throughout the United States, justifying the phrase that we are indeed living in the "Century of the Child." It was pointed out that approximately 30 years ago there were communities in Massachusetts where 300, out of every 1,000 children born, died during the first year of life, and it was pleasing indeed to note that because of constant campaigns for health among the young, this infant mortality has been reduced enormously. Boston, which had an infant mortality rate of 150 per thousand in 1900, was favored with the lowest rate in its history in 1931, namely, 61 deaths out of every thousand born. Diphtheria, responsible for over 200 deaths annually in Boston less than 10 years ago, has been conquered in a marked measure and only 10 residents of Boston died from this scourge during the past year. Typhoid fever has become so rare in our community that medical schools find it difficult to find material in this field for teaching purposes, and typhoid deaths have been reduced to almost zero.

The budget of the Boston Department of Health has been increased from a little over $200,000 per annum not so many years ago to an expenditure of over $1,000,000, in 1931. In view of the fact that the municipalities spend 15 times as much for education as they do for health, there is still justification for increasing expenditure by Health Departments. Thirty-one well-baby conferences are conducted weekly in 18 different sections of Boston and approximately 65,000 visits were made by mothers, who brought their children to these clinics. One hundred and fifty public health nurses employed by the City not only constantly visit homes disseminating health advice, but participate in the various clinics maintained under the auspices of the Health Department which include child hygiene clinics, tuberculosis clinics, preventoria, dental clinics, etc. No one can overemphasize the very important part played by these nurses who are really the bridge between the homes and the stations of the Health Department and who do so much to promote a greater knowledge about the possibilities of disease prevention and health promotion.

Seven health units serving as models for this type of municipal structure are located in the congested sections of the city. These Centers, veritable department stores of health, not only house the various activities of the Health Department but serve as headquarters for other private health and welfare agencies and do much to correlate and coördinate the various functions in this field. These Centers have been made possible because of the income from the George Robert White Fund, a very munificent bequest from an illustrious citizen of our City.

Dr. Wilinsky stressed the great need for increasing participation in public health by the rank and file of the medical profession and pointed out that it was impossible for official and private agencies alone to promote an adequate public health program

for the 120,000,000 inhabitants of the United States. He very definitely asserted that the well-trained physician was very well qualified to carry out many, if not all, of the preventive measures functioning under the auspices of Health Departments and private agencies and illustrated this point by calling attention to the fact that it was the physician engaged by the above groups who was doing most of this work and concluded by hoping that many in the audience—students of medical schools—would dedicate themselves when they entered the practice of their chosen profession to promote the public health by making of their own offices "Health Centers."

NEW ENGLAND HOSPITAL FOR WOMEN AND CHILDREN

The regular clinical conference of the New England Hospital for Women and Children will be held at the Hospital, Dimock Street, Roxbury, on Thursday, February 18 at eight P. M. Dr. Dwight O'Hara will speak on the subject of scarlet fever, and the address will be discussed by the staff.

ALICE H. BIGELOW, M.D., *Secretary.*

NEW ENGLAND PHYSICAL THERAPY SOCIETY

The next meeting of the New England Physical Therapy Society will be held in the Music Room at the Boston Square and Compass Club, 448 Beacon Street, Boston, on the evening of Wednesday, February 17, at 8 P. M.

The paper of the evening will be: "Treatment of Shoulder Conditions by Physical Therapy" by Dr. Howard Moore of Boston.

Discussion to be opened by Dr. Arthur L. Brown of Winchester.

Preceding the regular meeting, the Council will meet at 6 o'clock and dinner will be served at 6:30. Members planning to attend the dinner are requested to inform the Secretary before February 17.

At 7:30 a film from the State Department of Public Health will be shown.

Clinical cases and reports.

ARTHUR H. RING, M.D., *Secretary.*

Arlington, Mass.

NEW ENGLAND ROENTGEN RAY SOCIETY

The next meeting of the New England Roentgen Ray Society will be held at the Boston Medical Library, Boston, Mass., February 19, 1932.

"Anatomic and Functional Diagnosis of Heart Disease by Means of the Roentgen Ray."

Dr. George Levene and Dr. William D. Reid, Boston, Mass.

T. R. HEALY, *Secretary.*

THE NEISSERIAN MEDICAL SOCIETY OF MASSACHUSETTS

This meeting will be held in Thayer Hall, Worcester City Hospital, Worcester, Mass., Wednesday, February 17, at 8:00 P. M.

Subject:—Why Is the Control of Gonorrhea so Inadequate? George H. Bigelow, M.D., Commissioner of Public Health.

Followed by general discussion.

The medical profession is cordially invited.

J. DELLINGER BARNEY, M.D., *President.*
OSCAR F. COX, JR., M.D., *Secretary.*

BOSTON MEDICAL HISTORY CLUB

Sprague Hall, 8 The Fenway, Monday, February 15, at 8:15 P. M.

Daniel Whistler and the First Treatise on Rickets, 1645. Arthur B. Lyon, M.D.

The Ancient and Modern Practice of Medicine in China. Medical Experiences in City and Country. Illustrated by Stereopticon. Theodore C. Greene, M.D., of Peiping, China.

Physicians and medical students cordially invited to attend.

JAMES F. BALLARD, *Secretary.*

BOSTON CITY HOSPITAL

CLINICAL MEETING

At the Boston City Hospital, February 18, 1932, by the Department of Surgical Research and the Harvard Surgical Teaching Service, 7:45 P. M.

Dr. Earl R. Lehnherr:
"Chemical Findings in Arteriosclerotic Blood Vessels."

Dr. J. Edward Flynn and Dr. Stephen J. Maddock:
"Bile Peritonitis with Special Reference to Blood Chemistry."

Dr. Charles C. Lund:
"Some Aspects of the Surgery of Aneurysms."

Dr. Irving J. Walker:
"Hernia into the Prevesical Space."

Dr. Stephen J. Maddock:
"The Effect of Ligation of the Hepatic Artery."

Dr. Stanley J. G. Nowak:
"Experimental Studies in Spinal Anesthesia."

Dr. Augustus Riley:
"Conservative Kidney Surgery."

Dr. Frank W. Marvin:
"Avertin as a Basal Anesthesia."

Dr. Robert Aldrich:
"Treatment of Burns with Special Reference to Gentian Violet."

Dr. William A. White, Jr., and Dr. Edward A. Cooney:
"A Non-operative Treatment of Carbuncles."

SOCIETY MEETINGS
CONGRESSES AND CONFERENCES

February 12—The William Harvey Society. See page 259, issue of February 4.

February 15—Boston Medical History Club. See notice above.

February 16—South End Medical Club. See notice on page 260, issue of February 4.

February 17—The Neisserian Medical Society of Massachusetts. See notice elsewhere on this page.

February 17—New England Physical Therapy Society. See notice elsewhere on this page.

February 18—Medical Clinic at the Peter Bent Brigham Hospital. See page 308.

February 18—Boston City Hospital. See page 310.

February 18—New England Hospital for Women and Children. See page 310.

February 19—New England Roentgen Ray Society. See page 310.

February 25—Boston Health League, Inc. See page 259, issue of February 4.

February 26—New England Pediatric Society. See page 259, issue of February 4.

March 2 - June 1—New England Heart Association. See page 891, issue of October 29.

March 28—Examination Conducted by the American Board of Obstetrics and Gynecology (written)—May 10 (general, oral and clinical). See page 252, issue of February 4.

March - April, Autumn — International Postgraduate Courses in Berlin. See page 1169, issue of December 10.

April 4-8—The American College of Physicians. See notice on page 1232, issue of June 4.

May 9-13—American Medical Association, New Orleans, La.

June 8, 9, 10—Massachusetts Medical Society, Hotel Statler, Boston.

October 24-27—American Public Health Association. See notice on page 1321, issue of December 31.

October 24-29—Inter-state Postgraduate Medical Association of North America. See page 38, issue of January 1.

DISTRICT MEDICAL SOCIETIES

Essex North District Medical Society

May 4—Annual meeting at Lawrence.

Essex South District Medical Society

March 2, Wednesday—Lynn Hospital. Clinic 5 P. M. Dinner 7 P. M. Subject to be announced later. Speaker: Dr. Elmer W. Barron, Boston.

April 6, Wednesday—Essex Sanatorium, Middleton. Clinic 5 P. M. Dinner 7 P. M. Speaker: Dr. Arthur P. Wakefield, State Department of Health. Subject: 10-Year Tuberculosis Program in the Public Schools.

May 5, Thursday—Censors' Meeting, Salem Hospital, 3:30 P. M.

May 10, Tuesday—Annual Meeting. The Tavern, Gloucester. Speaker and subject to be announced later. Ladies invited.

Franklin District Medical Society

Meeting will be held on the second Tuesday of March and May at the Weldon, Greenfield, at 11 A. M.

CHARLES MOLINE, Secretary.

Middlesex East District Medical Society

At a meeting of the executive committee the following schedule for the Middlesex East District Medical Society was arranged:

March—At Reading.

May—At Woburn.

Meetings on the second Wednesday of each month unless otherwise announced.

Norfolk District Medical Society

February 23—Place to be announced. Clinico-Pathological meeting. Dr. Frank S. Cruickshank, and Dr. J. W. Budd of the Medical and Pathological Staff of the Boston City Hospital.

March 29—Place to be announced. Boston Public Health Meeting. Speakers, Honorable James M. Curley, Dr. Francis X. Mahoney, Dr. Charles Wilinsky, Dr. W. H. Griffin.

May—Annual Meeting, date and place to be announced.

May 5—Censors' Meeting for examination of candidates. Roxbury Masonic Temple, 171 Warren Street, Roxbury, 4 P. M. Fee $10.00 payable at time of examination. All candidates will have applications in the hands of the secretary one week prior to this date. All candidates from Medical Schools not on approved list of Society must have application complete two weeks prior to date of examination.

F. S. CRUICKSHANK, Secretary.

Norfolk South District Medical Society

March 3—Speaker: Roderick Heffron, M.D. Subject: Pneumonia.

April 7—To be announced later.

May 5—Annual meeting.

The time of all meetings is 12 o'clock noon, at the Norfolk County Hospital, South Braintree. Censors will meet on May 5 at 11:15 A. M. at the Norfolk County Hospital.

N. R. PILLSBURY, Secretary.

Suffolk District Medical Society

February 24—Clinical Program, the Children's Hospital.

March 30—Clinical Program, New England Deaconess Hospital.

April 27—The Annual Meeting, Boston Medical Library. Election of Officers.

The Medical Profession is cordially invited to attend all of these meetings.

REGINALD FITZ, M.D., Vice President.
LELAND S. McKITTRICK, M.D., Secretary.
HILBERT F. DAY, M.D., Boston Medical Library.

Worcester District Medical Society

Wednesday evening, March 9 — Memorial Hospital, Worcester, Mass. 6:30—Dinner, complimentary by Memorial Hospital. 7:45—A pediatric meeting with subjects to be announced later.

Wednesday evening, April 13—Grafton State Hospital, North Grafton, Mass. 6:30—Dinner, complimentary by Grafton State Hospital. 7:45—Program to be announced later.

Wednesday afternoon and evening, May 11—Annual Meeting. Program to be announced later.

ERWIN C. MILLER, Secretary.

BOOK REVIEWS

Die vierfache Muskelinnervation: einschliesslich der Pathogenese und Therapie der progressiven Muskeldystrophie. By KEN KURÉ. Berlin: Urban & Schwarzenberg, 1931. xii + 320 pages. Price, RM 20.

This work is based on a long series of experiments on muscle tonus. The author is one of the strong adherents to the school which believes that the parasympathetic (or autonomic) nervous system controls the tone of the voluntary muscles. He was greatly influenced by the original histological papers of Boeke and Langelaan and by the work of J. I. Hunter. Further investigations by numerous physiologists have not upheld this point of view. Kuré's book, however, is a fair compilation of all the literature on the subject, with a report of his own experimental work. One feels that the author has drawn his conclusions from unsound, or at least uncertain, data. The clinical application of his theory, based on the treatment of muscular and neuromuscular diseases by the use of drugs which are known to affect the autonomic nervous system, must also be considered as in such a preliminary stage as to have little practical importance. The book is a well-written dissertation and contains many references to the literature and numerous excellent illustrations. It will, perhaps, be welcome to physiologists for its bibliography and it may prove stimulating to those interested in neuromuscular mechanisms.

Studies from the Rockefeller Institute for Medical Research. Reprints. Vol. 77. Published by the Rockefeller Institute for Medical Research, New York, 1931. Pp. 628.

This volume of reprints from the Rockefeller Institute will be of particular interest to the student of tuberculosis as well as to the bacteriologist and immunologist. It contains a complete reprint of the Studies on Tuberculosis by Sabin, Doan, and Forkner, which appeared as a supplement to the De-

cember, 1930 number of the *Journal of Experimental Medicine*. In addition, there are studies of the properties of proteins and polysaccharides derived from the tubercle bacillus. It is impractical in a brief review adequately to cover the material presented in the articles, and they should be read in the original by those interested. The remainder of the volume consists of the usual wide range of studies covering various phases of the work of the institute.

A Manual of Clinical Laboratory Methods. By C. L. CUMMER, PH.B., M.D., F.A.C.P. Lea and Febiger. Third Edition. Phila. 1931. Pp. 583. Price $6.75.

This edition of the useful laboratory guide of Dr. Cummer presents some changes from the preceding. Of special interest in view of recent trends in laboratory work are the sections on the Kahn reaction, the Schilling index, the sedimentation test, and the icteric index. A rather useful feature, particularly for those not doing a good deal of laboratory work, is a short table of normal findings, which occupies the two last pages of the book. Of course, in any volume which does not reach ponderous size many methods of considerable value must be omitted. However, the omissions are rather of alternative methods than of complete omissions of a given type of test.

In view of the rapid progress in the field of pneumococcus typing it is to be regretted that there is not reference to other than the four standard types. Curiously enough, ascitic fluid does not appear in the index. The index is the least satisfactory part of the book. This is particularly unfortunate in a book of this type and one so worthy of frequent reference.

Annals of the Pickett-Thomson Research Laboratory. Vol. VII, 1931. The Pathogenic Streptococci. Baillière, Tindall and Cox and The Williams and Wilkins Co. Price $10.

This is a volume of 440 pages, containing over 1600 references to recent and current literature on pathogenic streptococci. Although it is the fifth such volume, the authors—David and Robert Thomson—state that they are not yet near the end of their task. There are contained in this issue three monographs, numbered and named as follows:

XII. The Rôle of the Streptococci in Erysipelas.

XIII. The Rôle of the Streptococci in Skin Diseases.

XIV. The Rôle of the Streptococci in Measles.

There is general agreement that Streptococcus Erysipelatis causes erysipelas. Practically all the work supporting this specific relationship deals with the biologic and immunologic properties of the microbes, as exhibited in laboratory animals and media. Such study is necessarily indirect. The variability of the therapeutic results obtained by the use of sera and vaccines suggests the possible importance of manufacturing methods. The specific treatment of erysipelas, however, seems to be in the same dark forest with that of lobar pneumonia, and with the convalescent serum treatment of poliomyelitis.

The rôle of the streptococci in skin diseases is a motley one. Some half-hundred dermatologic names are brought up as of possibly associated conditions. The difficulties of skin culture methods are emphasized, and they undoubtedly limit and confuse our knowledge of the relations existing between the dermatoses and the streptococci.

The ubiquity of streptococci is again emphasized in the story of their association with measles. No convincing evidence of a causal relationship has been confirmed. The authors incline to the belief that the organism of measles has not been discovered, that it is an invisible filter-passing virus; and that streptococci are present in the rôle of secondary invaders. It was extremely interesting that the authors were able to recognize measles with a considerable degree of accuracy by studying the streptococcus colonies from throat swabs of unknown cases. Crowe's medium was used for these observations. They invite the engaging thought that secondary invaders adapt themselves to the altered resistances in their hosts.

There are many and good photographic plates of magnified colonies and microscopic smears. These monographs are excellent and valuable compilations of data on their respective subjects, although the material presented and discussed is too vast in its scope to make good clinical reading for physicians who are not especially interested in the ramifications of the theme.

Hypertension and Nephritis. By ARTHUR M. FISHBERG, M.D. Second Edition. Published by Lea & Febiger, Philadelphia. 619 pages. Price $6.50.

One of the most comprehensive treatises which this reviewer has ever read is Fishberg's book on hypertension and nephritis. The author has covered the literature on these subjects in a most thorough fashion, and in his text he summarizes the conclusions of other writers, old and new, who deal with the various phases of these subjects. Fishberg begins with the pathologic physiology of renal function; his next chapter deals with tests of renal function, and he follows this with chapters on albuminuria, edema and uremia. There follows a section on hypertension, with chapters on its manifestations in the brain and in the retina.

The author then gives a historical survey of the development of our knowledge of Bright's Disease, with the principal classifications that have been applied to its different forms. He himself employs the following classifications:

1. Benign albuminuria, including the orthostatic.
2. Nephrosis.
   a. Larval nephrosis.
   b. Necrotizing nephrosis.
   c. Chronic nephrosis.
   d. Amyloid nephrosis.

3. Nephritis.
   a. Glomerulo-nephritis.
   b. Focal nephritis.
   c. Acute interstitial nephritis.
4. Multiple glomerular embolization in subacute bacterial endocarditis.
5. Essential hypertension, including the malignant phase.
6. The senile arteriosclerotic kidney.

Each of these phases of renal disease is described in turn, with sections on the pathology, the diagnosis, prognosis and treatment of each type.

The book concludes with a brief chapter on renal and hypertensive disease in pregnancy.

The author has succeeded in presenting the subject of hypertension and nephritis most admirably. There is a mixture, in proper proportions, of the theoretical and the practical considerations, and of the views of others and of the writer himself.

Although there is so much information condensed into a relatively small space, the book is so well planned and so clearly written that it is not difficult to read. It should prove of great value to the medical profession.

A Text-Book of Pathology. By FRANCIS DELAFIELD, M.D., LL.D., and T. MITCHELL PRUDDEN, M.D., LL.D. Revised by Francis Carter Wood, M.D. Fifteenth Edition. William Wood and Company. New York. 1931. Pp. 1339. Price $10.00.

The fact that this is the fifteenth edition speaks well for the value and popularity of this well-known textbook. The original firm foundation of Delafield and Prudden has been built upon wisely and well by Dr. Wood. This is really the best of the encyclopedic type of textbook in English.

It has been kept well up-to-date except for the references. From the standpoint of the student and the ordinary practitioner it would be advantageous to have more recent references and more to English rather than to German articles. The illustrations are of good quality and sufficiently profuse to illustrate well the various lesions discussed. The excellent section on the technique of postmortem examinations is of much value for all who may be called upon from time to time to do their own autopsies.

Living the Liver Diet. By ELMER A. MINER, M.D. C. V. Mosby Company, St. Louis, 1931. 106 pages. Price, $1.50.

Within the covers of this small book Dr. Miner has gathered together a great deal of information for the use of patients with pernicious anemia who are compelled to use liver instead of liver extract. There are a great many recipes for cooking or preparing liver so that the patient does not tire of it. There is also adequate discussion of food and food values so that the layman afflicted with pernicious anemia can intelligently carry out his own régime.

One Hour of Medical History. Compiled by BENJAMIN SPECTOR, M.D. Boston: The Beacon Press, Inc., 1931. xv + 88 pages. Price $1.00.

This small volume consists of the text of the introductory speeches given by the medical students at the Tufts Medical School in connection with the presentation of a medical history pageant. Ten characters are portrayed, from Hippocrates to Ehrlich. There is a preface by Dr. Charles F. Painter, Professor of the History of Medicine at the Tufts Medical School, and a few notes in regard to an exhibition of medical history books shown at the Boston Medical Library by the Director, Mr. James F. Ballard. The illustrations consist of a group picture of the characters involved in the pageant and portraits of the individual men depicted. This method of teaching medical history has great possibilities in that it gives a vivid picture of the individual as he might have appeared at the time in which he lived.

The Cardiac Cycle. By HARRINGTON SAINSBURY. 79 pages. William Wood & Company, New York, 1931. Price $1.75.

In this little book Sainsbury has reviewed the events of the cardiac cycle, taking up in particular in the first place the rôles played by auricular systole, ventricular systole, and the elastic recoil of the bulbus aortae and aortic valve in the circulation of the blood, and in the second place, the course of lymph centripetally, a subject much neglected in physiologic treatises. In addition to the usual concepts of the mechanism of the circulation he presents several theories not ordinarily held by present-day authorities: These are (1) an initial contraction of the muscle at the cardiac apex to protect its "thin spots" from the force of the ensuing contraction of the bulk of the ventricular muscle; (2) the production of the arterial pulse wave by the very beginning of left ventricular contraction during the isometric period before the aortic valve opens, that is, before the blood itself begins to enter the aorta, and (3) the special rôle of the bulbus aortae, the potentially spherical bulge of the aorta immediately above the aortic valve (containing the mouths of the coronary arteries), to maintain a fairly uniform head of pressure in the arterial system during diastole through its elastic distensibility which is thought to be more marked than that of the rest of the aorta. Assistance is asked in helping to establish these theories, as for example when the author writes "It would be of interest to know whether the bulb, apart from the mechanical advantage of its spherical form, is more richly endowed with elastic tissue elements than the aorta". The author insists further on the need of considering as separate phenomena the molar movement of the blood mass at a rate of about 0.3 meter per second and the traveling pulse wave which proceeds along the larger arteries at a rate of 6 to 10 meters per second.

Finally a plea is made for a greater interest and more careful study of the lymphatic circulation. Three factors are considered of particular importance in bringing about the flow of lymph into the great veins: (1) suction produced by the negative pressure in the thorax with the pumping effect of the diaphragm which acts even during sleep, (2) the compression of the lymphatic vessels by contracting muscles throughout the body, and (3) the *vis a latere* transferred from the arterial pulse wave to become a *vis a tergo* in the lymphatics. The manifold valvular structure of the lymphatic vessels converts the lateral pressure exerted by muscles and arterial pulse wave into a centrifugal flow of lymph.

For the sake of completeness the author might have followed the blood flow through the capillaries and veins back into the heart, again emphasizing the help derived by the suction of the negative intrathoracic pressure and by the contraction of body muscles.

The reviewer has found this presentation of old and new ideas entertaining and stimulating.

Medical Art Calendar. Published by J. Philip Kruseman, The Hague, Holland, 1932.

This calendar is similar to those which have been received for a number of years and makes a very attractive medical item. There are excellent reproductions of well-known paintings, especially Dutch scenes, all with medical interest. The notes in regard to the pictures are published both in Dutch and English. The high standard of this calendar set many years ago has been maintained in the issue for 1932.

BOOKS RECEIVED FOR REVIEW

Courts and Doctors by Lloyd Paul Stryker. Published by The Macmillan Company. 236 Pages. Price $2.00.

A Text-Book of Clinical Neurology by Israel S. Wechsler. Second Edition. Published by W. B. Saunders Company. 759 Pages. Price $7.00.

Female Sex Hormonology by William P. Graves. Published by W. B. Saunders Company. 131 Pages. Price $3.50.

Electrotherapy and The Elements of Light Therapy—by Richard Kovács. Published by Lea and Febiger. 528 Pages. Price $6.50.

Illustrated Primer on Fractures. Prepared by the Coöperative Committee on Fractures. Second Edition. Published by The American Medical Association. 63 Pages. Price $1.00.

The Fundus of The Human Eye by Ernest Clarke. Published by Humphrey Milford, Oxford University Press.

A Text-Book of Medicine For Nurses by E. Noble Chamberlain. Published by Humphrey Milford, Oxford University Press. 439 Pages.

Arbeiten aus der dritten Abteilung des Anatomischen Institutes der Kaiserlichen Universität Kyoto. Edited by Prof. Dr. Seigo Funaoka. Serie A. Untersuchungen über das periphere Nervensystem. Number 2. 190 Pages.

Textbook of Gynecology for Nurses by Philip J. Reel. Published by F. A. Davis Company. 282 Pages. Price $2.50.

Notes on Children's Nursing by Marguerite C. Erxleben. Published by F. A. Davis Company. 242 Pages. Price $2.00.

Varicose Veins by H. O. McPheeters. Third Edition. Published by F. A. Davis Company. 285 Pages. Price $4.00.

Psychology and Psychiatry in Pediatrics: The Problem. Publication of the White House Conference on Child Health and Protection. Published by The Century Co. 146 Pages. Price $1.50.

Body Mechanics: Education and Practice. A Publication of the White House Conference on Child Health and Protection. Published by The Century Co. 166 Pages. Price $1.50.

Studies from the Rockefeller Institute for Medical Research. Reprints. Volume 79. Published by The Rockefeller Institute for Medical Research. 626 Pages.

The Practical Medicine Series. General Medicine edited by George H. Weaver et al. Series 1931. Published by The Year Book Publishers. 814 Pages. Price $3.00.

A Doctor of the 1870's and 80's by William Allen Pusey. Published by Charles C. Thomas, Publisher. 153 Pages. Price $3.00.

Monographs of the Pickett-Thomson Research Laboratory—Volume 1. The Vitamins by Ethel Browning. Published by The Williams and Wilkins Company. 575 Pages. Price $10.00.

Growth in Private School Children by Horace Gray and J. G. Ayres. Published by The University of Chicago Press. 282 Pages. Price $3.50.

Fundamentals of Orthopaedic Surgery in General Medicine and Surgery. (Harvard Lectures) by Robert B. Osgood and Nathaniel Allison. Published by The Macmillan Company. 311 Pages. Price $3.00.

Transactions of the American Association of Genito-Urinary Surgeons. Volume XXIV. Published by The Bruce Publishing Company. 439 Pages.

Imhotep to Harvey—Backgrounds of Medical History by C. N. B. Camac. Published by Paul B. Hoeber, Inc. 324 Pages. Price $3.75.

History of Medicine in the United States by Francis R. Packard. Volumes I and II. Published by Paul B. Hoeber, Inc. 1348 Pages. Price $12.00.

The Practical Medicine Series. General Surgery edited by Evarts A. Graham. Series 1931. Published by The Year Book Publishers. 804 Pages. Price $3.00.

Annual Report of the Surgeon General of the Public Health Service of the United States for the fiscal year 1931. Published by the United States Government Printing Office. 354 Pages. Price 85c.